VOLUME 3

DRAFT
ENVIRONMENTAL IMPACT STATEMENT

GREGORY CANYON LANDFILL

San Diego County, California

APPENDIX E–AGRICULTURAL RESOURCES

- Assessment of Agricultural Resources Based on the San Diego County Local Agricultural Resources Assessment (LARA) Model, PCR Services Corporation, August 2012

APPENDIX E

ASSESSMENT OF AGRICULTURAL RESOURCES BASED ON THE SAN DIEGO COUNTY LOCAL AGRICULTURAL RESOURCES ASSESSMENT (LARA) MODEL

1. INTRODUCTION

The California Department of Conservation encourages local agencies to develop agricultural models to account for the variability of local agricultural resources and conditions. The County of San Diego developed an assessment approach, referred to as the Local Agricultural Resource Assessment (LARA) model, to evaluate the relative value of agricultural resources in the County. The LARA model is implemented by the San Diego County Department of Planning and Land Use (DPLU) to assess the relative value of agricultural resources in the context of discretionary land use projects. San Diego County has chosen to use the LARA model, rather than the California, Department of Conservation Land Evaluation and Site Assessment (LESA) model (another assessment model accepted by the Department of Conservation), because the LARA model accounts for the large number of farms in the County that are less than 10 acres in size and takes into account the County's unique soil conditions. The LARA model considers soils, climate and water as primary model factors while also considering the presence of Williamson Act Contracts, other preserved lands, and existing land uses in the surrounding area.

The LARA is a County process and has been applied to the project alternatives, including the Gregory Canyon Alternative, Aspen Road Alternative, Gopher Canyon Road Alternative, Merriam Mountain Alternative, and East Otay Mesa Alternative, located in unincorporated San Diego County. Although the Sycamore Canyon Expansion Alternative, which is located within the City of San Diego, is not addressed in the LARA, certain graphics pertinent to the agricultural character of the site are provided at the end of this report, following the East Otay LARA discussion.

2. LOCAL AGRICULTURAL RESOURCES MODEL

The LARA model takes into account the following factors in determining the importance of an agricultural resource:

Required Factors:	Complementary Factors:
• Water	• Surrounding Land Uses
• Climate	• Land Use Consistency
• Soil Quality	• Topography

The following discussion describes the potential Alternative sites, Gregory Canyon, Aspen Road, Gopher Canyon Road, Merriam Mountain, and East Otay Mesa according to the LARA model's required and complementary factors. The Sycamore Canyon site is not evaluated through the LARA model since it is not located in unincorporated San Diego County and LARA criteria would not be applicable. The values of the Sycamore Canyon site as an agricultural resource was evaluated in the Sycamore Canyon EIR under the City of San Diego threshold criteria.

Although the following discussions address the issues and methodology used in the County's LARA assessments, these do not comprise LARA assessments, which must be performed by the DPLU, prior to any discretionary land use actions. Because the Gregory Canyon property was re-zoned under Proposition C, it would not be subject to the LARA analysis. However, the LARA model helps to identify valuable agricultural land and is useful for the purpose of evaluating the site's agricultural resources.

3. ALTERNATIVE LANDFILL SITES

A. Gregory Canyon Property

The Gregory Canyon property consists of approximately 1,770 acres of primarily undeveloped or vacant land. Approximately 88.3 acres of the site were formerly occupied by the Lucio Family Dairy, which closed in 1986, and the Peter Verboom Dairy, which closed in approximately 2006. The biological resources assessment performed for the site estimates that approximately 58.4 acres of the property were used for agricultural purposes see Section 4.4, Biological Resources, Table 4.4-1 of this EIS). Agricultural areas are illustrated in **Figure 1**, *Gregory Canyon Property Vegetation Map*. Agricultural areas were used for grazing or hay pastures for on-site dairy livestock. GIS-mapped soils indicate that the site contains approximately 223 acres of soils that are considered candidate "Prime Soils" and "Soils of Statewide Importance."[1]

Historical aerial photos of the site indicate dairy operations and limited cultivation for feed crops through many decades. The closure of the two on-site dairies (Verboom and Lucio) is largely related to the general decline in dairy farming in San Diego County from the early 1970s to the 1990s[2] and is not due to either the quality of on-site soils or water supply. The decline in dairy operations in the County occurred as a result of stagnant milk prices, high feed costs, and high taxes. During that time period, more than half of the County's dairies closed or were relocated to the Central Valley (see Section 4.5.1 Historical and Archaeological Resources, of the Gregory Canyon Landfill EIS).

The Gregory Canyon property also contains a few fruit trees that were planted for domestic use around the main farm residence on SR 76 (Lucio Dairy). The site also contains approximately 12 Russian olive trees (ornamentals) at the top of the hill along future Borrow/Stockpile Area B, primarily outside the future borrow/stockpile footprint. Throughout its history, the site never supported orchard production.

Under the 1994 initiative, Proposition C, the site was designated Public/Semi-Public Lands, with a Solid Waste Facility designator in the San Diego County General Plan. The site is also designated as a "reserved proposed landfill site" in the San Diego County 2005 Siting Element. With the exception of the landfill footprint area (and respective ancillary facilities and borrow/stockpile areas), a large portion of the site (approximately 1,313 acres) would be maintained as permanent open space as required by Proposition C for the long-term preservation of sensitive habitat and species. In addition, the project would result in the implementation of a Habitat Restoration and Resource Management Plan (HRRMP). At the end of the approximately 30-year operation of the landfill, the remainder of the site affected by the landfill and ancillary activities would be undeveloped open space. The proposed landfill, dedication of a minimum of 1,313 acres of open space, and implementation of the HRRMP would preclude any future use of the property for agricultural purposes. **Table 1**, *Components of the Applicant's Proposed Project Alternative at the Gregory Canyon Site*, provides a summary of the landfill components according to land area.

[1] San Diego Association of Governments, GIS database, 1997.

[2] Ramiro Lobo, SFP Advisor, San Diego County, UC Cooperative Expansion, San Marcos, CA, November 8, 2011, telephone conversation, 760-752-4725.

Applicant's Proposed Alternative

Plant Communities

AGR - Agricultural Land

AGR/DEV - Agricultural Land / Developed

CHP - Chaparral

CRF - Cottonwood-willow Riparian Forest

CSS - Coastal Sage Scrub

CSS/CHP - Coastal Sage Scrub / Chaparral

CSS/NNG - Coastal Sage Scrub / Non-Native Grassland

DCRF - Disturbed Cottonwood-willow Riparian Forest

DCSS - Disturbed Coastal Sage Scrub

DCSS/NNG - Disturbed Coastal Sage Scrub / Non-Native Grassland

DEV - Developed

DH - Disturbed Habitat

DIS - Disturbed

DSWS - Disturbed Southern Willow Scrub

LOW - Coast Live Oak Woodland

MFS - Mulefat Scrub

NG - Native Perennial Grassland

NNG - Non-Native Grassland

NNG/CSS - Non-Native Grassland / Coastal Sage Scrub

OC - Open Channel

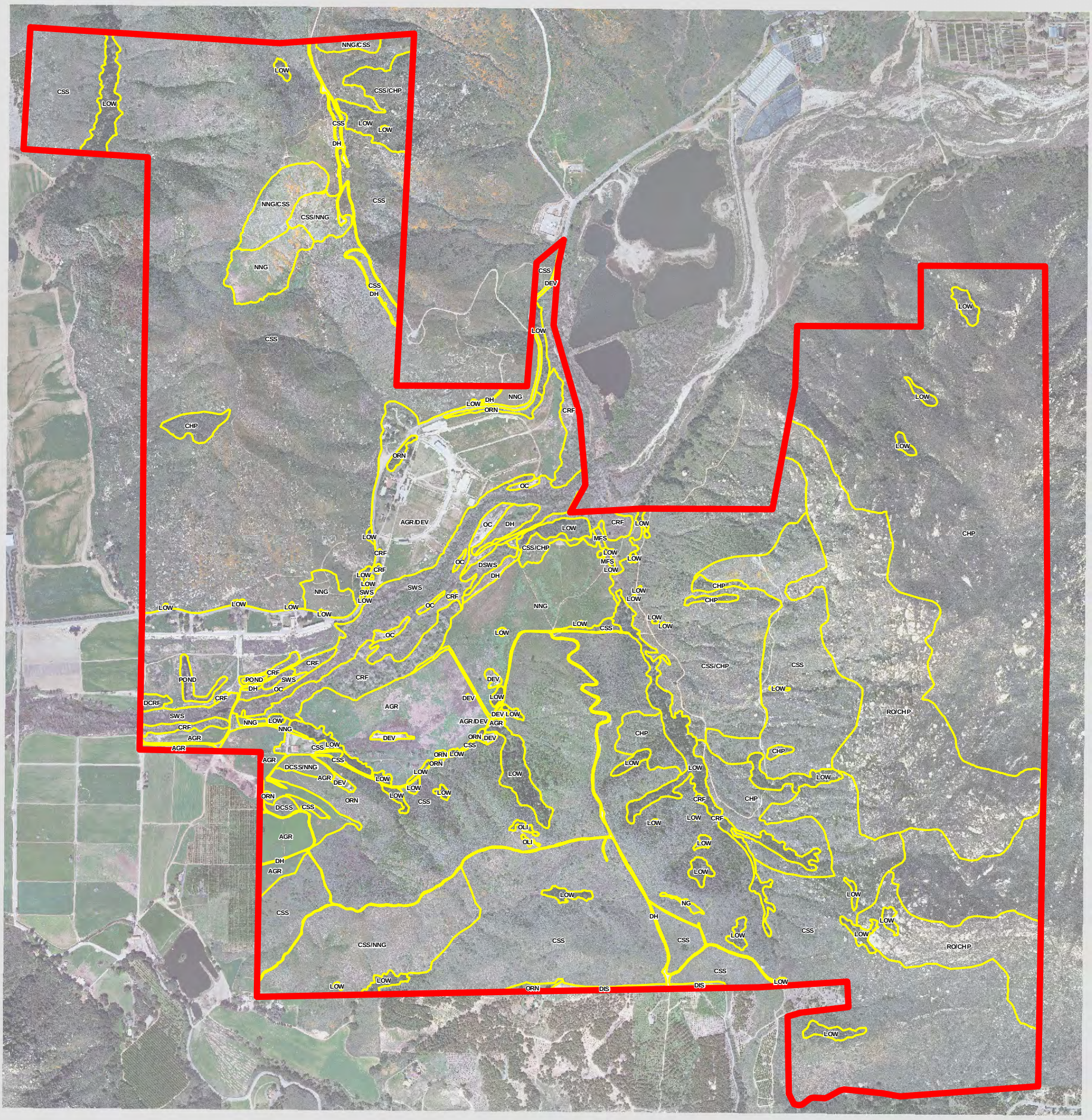
OLI - Olives

ORN - Ornamental

POND - Pond

RO/CHP - Rock Outcrop / Chaparral

SWS - Southern Willow Scrub



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Gregory Canyon Property Vegetation Map

Gregory Canyon

Source: Gregory Canyon, Ltd., 2012.

FIGURE

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Table 1

Components of the Applicant's Proposed Project Alternative at the Gregory Canyon Site

Component	Size (acres)
Landfill Footprint	196.3 [a]
Ancillary Facilities Area	11.9
Access Road and Bridge	4.1
Borrow/Stockpile Area—A	22.4
Borrow/Stockpile Area—B	64.5 [b]
Borrow/Stockpile Area Haul Road	3.1
Desilting Basin—East	1.8
Desilting Basin—West	3.7
Subtotal:	307.8
Open Space	1,325
Total Area	1,753.5 [c]

[a] *Includes 13.1 acres for the three SDG&E transmission pads*
[b] *Includes approximately 10 acres to the east of the SDCWA easement*
[b] *Does not total entire site of approximately 1,770 acres as some areas of the site are not part of the components or open space (i.e., areas associated with future Pipeline No. 6).*
Source: Bryan A. Stirrat & Assoc., 2011; PCR Services Corporation, 2012

Water

The Gregory Canyon site is within the jurisdiction of the San Luis Rey Municipal Water District (SLRMWD) and Rainbow Municipal Water District (RMWD). As shown in **Figure 2**, *Gregory Canyon Property Water District Boundaries,* the majority of the site (approximately 1,420 acres) is located within the service area of SLRMWD and a corner of the Gregory Canyon property located to the north of SR 76 is located in the RMWD. The San Luis Rey River groundwater is the sole source of the water to landowners within the SLRMWD area. There is no imported water supply or backup water supply available within the boundary of the SLRMWD. Landowners within the SLRMWD's boundaries rely exclusively on groundwater (wells) to supply their domestic, agricultural, and commercial water demands. Several wells have been identified in the vicinity of the former dairies and a cultivated area near the western boundary of the site, south of SR 76.

The remainder of the Gregory Canyon property, approximately 350 acres to the north of the San Luis Rey River, is located within the service area of RMWD. No agricultural uses or grazing occur in this area due to steep topography and poor quality soils.

Historical well water use associated with prior agricultural use is estimated to be 465 AFY.[3] It is expected that this water supply would be available if the property were returned to the former agricultural use of dairy farming. Biological assessments performed for the site indicate that approximately 78.1 acres of the property are identified as "agricultural" (not occupied by native or other wild or invasive species). As discussed above, SANDAG records indicate that the site contains approximately 223 acres of soils that are

[3] This estimate was provided to SLRMWD by previous landowners who occupied the portion of the site within the SLRMWD boundary at one time.

6 SANDAG-SanGis Data (1997).

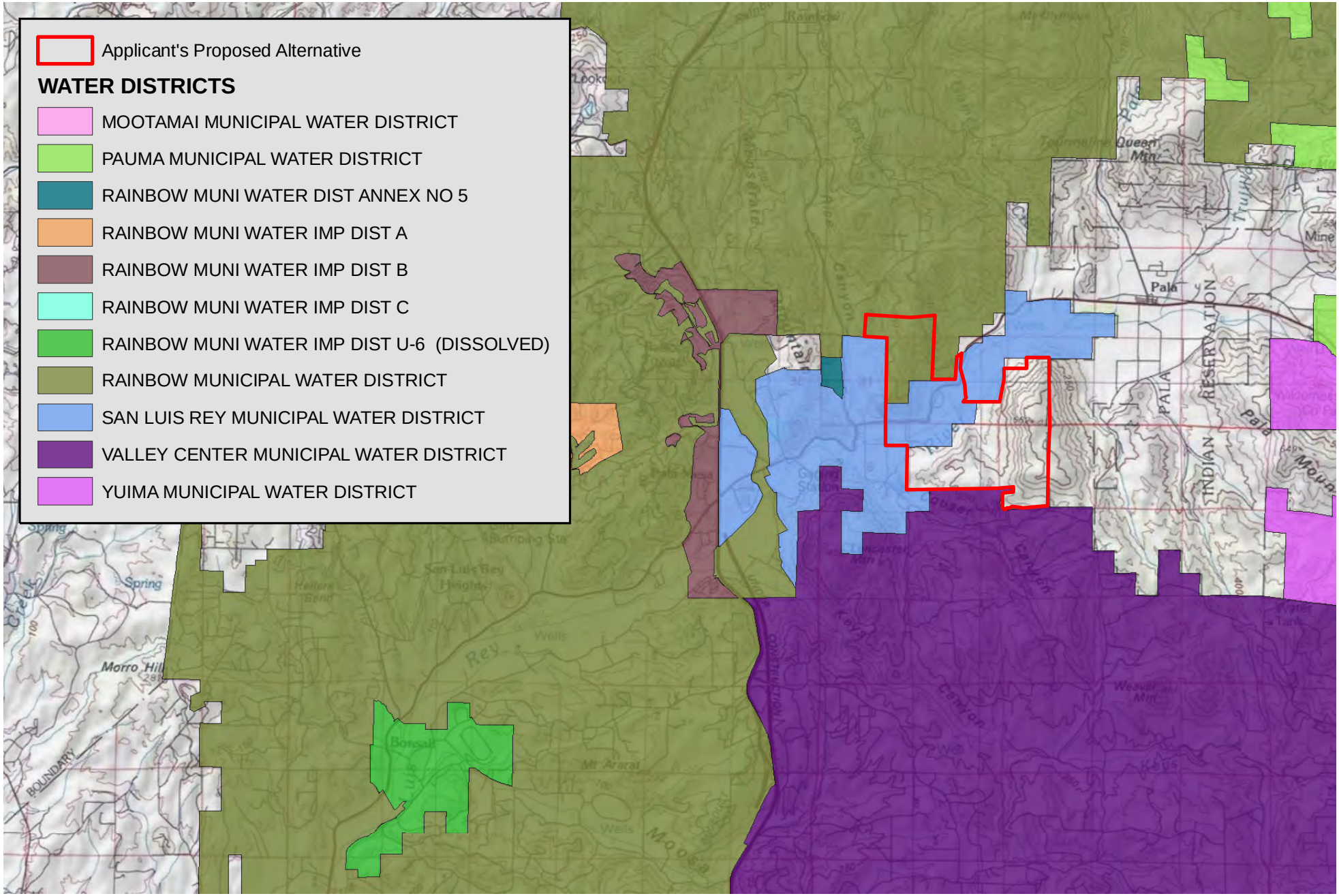
considered candidate "Prime Soils" and "Soils of Statewide Importance."[4] The difference between the "agricultural" areas and the total acreage of arable soils indicates that approximately 78.1 acres could be irrigated by well-water and natural supplies. The former agricultural land was used for grazing or hay pastures for on-site dairy livestock. With the exception of a few acres of grass for livestock feed, the Gregory Canyon property did not support crop production. Historically, the property has not been planted with citrus or avocado groves or field crops (as have surrounding properties to the south and west, respectively). Well water on the site was used for operation activities (domestic use and operation of milking activities and livestock care). The historically predominant agricultural use, grazing, has comparatively low water demand.

It is expected that water would be available for agricultural uses, such as dairy farming, if the site were to return to active agricultural operations. Adequacy of water for other types of agricultural uses is unknown, although the historical use of the site indicates that well water may not support the agricultural development of all the site's arable soils. However, with respect to former agricultural uses (78.1 acres), water availability is considered "moderate."

Climate

The San Diego Plant Map, prepared by the University of California Agricultural Expansion Service, designates the Gregory Canyon site as Subdivision 3 of the Coastal Region. Of San Diego County's four plant map subdivisions (Subdivision 1, Maritime/Inland Zone; Subdivision 2, Hill and Mesa District; Subdivision 3, Valley and Canyon District; and Subdivision 4, High Elevation Zone), Subdivision 3 has an incrementally shorter growing season than Zones 1 and 2. This area is also described as "transitional" on the SANDAG-SanGIS Climate Zone map (see **Figure 3**, *Gregory Canyon Area Climate Zone*). Based on the 30-year average rainfall, the Gregory Canyon property receives an average of approximately 15 -18 inches per year; whereas, the easterly section receives approximately 18-24 inches per year (see **Figure 4**, *Gregory Canyon Area Average Rainfall - 30 year average*).

Sunset zones are further used as a standard measure of climate suitability due to the variability of microclimate conditions that the Sunset zones take into consideration. Recognizing the Sunset zones were not developed as a tool to determine the suitability for commercial agricultural production, their use is not intended to determine suitability for specific crops. Rather, Sunset zones are considered a measure of overall climate suitability for the typical agricultural commodities produced in San Diego County. The Gregory Canyon site is located in Zone 19, which is titled "Thermal belts around Southern California's interior valleys." According to Sunset, Climate Zone 19 is little influenced by the ocean and is characterized by hot summers. This zone extends in a generally northwest- trending band from the community of Valley Center on the south to the approximate latitude of Elsinore in Riverside County on the north. Climate Zone 19 is slightly less temperate than the majority of climate zones along the I-15 corridor in San Diego County, which range from Zones 20, 21, and 23. For instance, the City of Escondido is located in Zone 20 and the community of Fallbrook is located in Zone 23. However, many sections of Zone 19 are suitable for a range of truck crops and are prime for citrus and many types of avocados due to hot summers.



Gregory Canyon Property Water District Boundaries

FIGURE
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Gregory Canyon
Source: SANDAG, 2012; PCR Services Corporation, 2012.

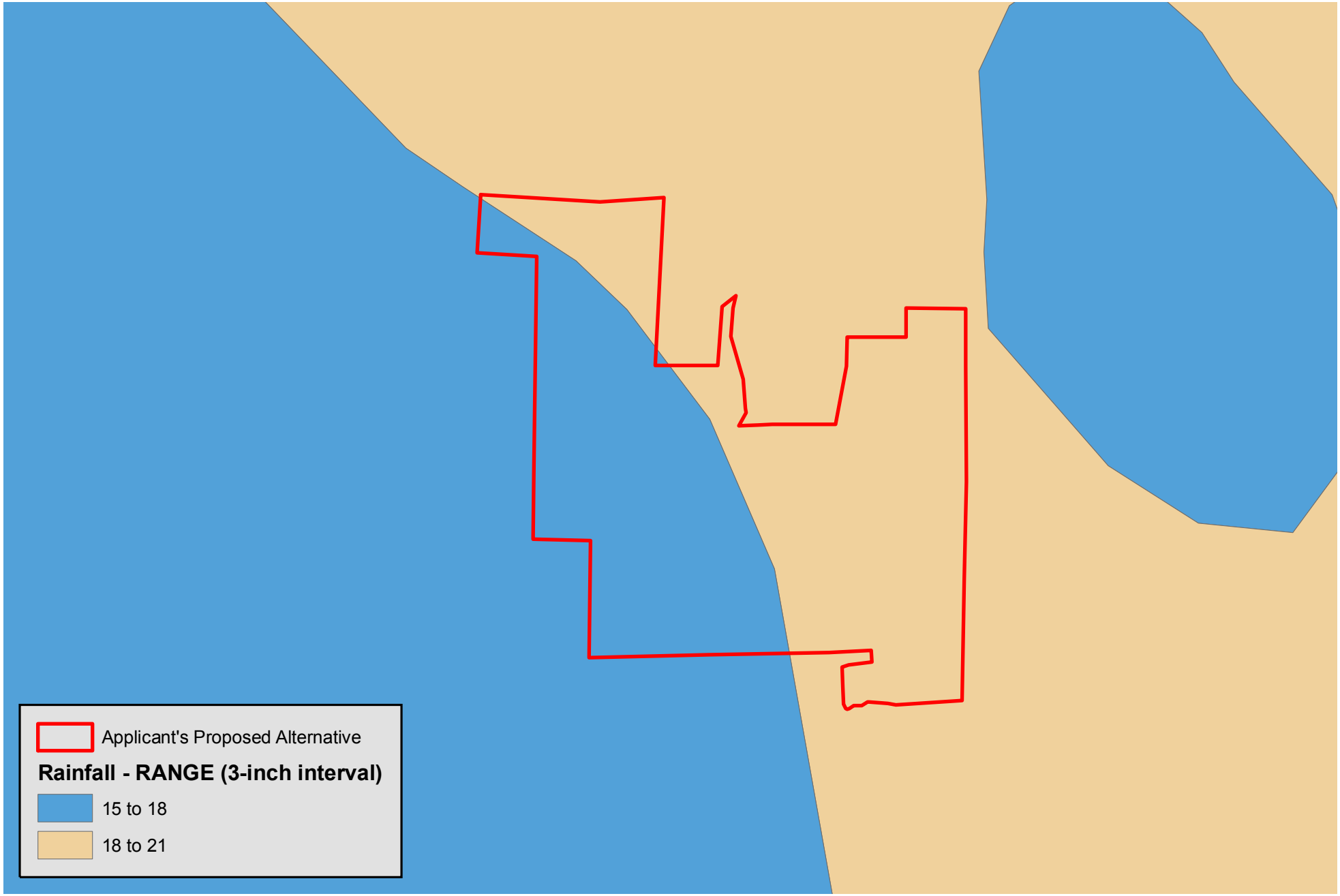
Gregory Canyon Area Climate Zone

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

3



Gregory Canyon Area Average Rainfall 30 Year Average

FIGURE
4

Gregory Canyon
Source: SANDAG, 2012; PCR Services Corporation, 2012.

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Under the Sunset zone system, extreme winter lows associated with Zone 19 over a 20-year period ranged from 28°F to 22°F. All-time lows at different weather stations ranged from 23°F to 17°F. In comparison, the average lows in nearby Fallbrook (approximately 8 miles to the northwest of the Gregory Canyon site) range from 43°F to 48°F. By comparison, the extreme lows in Fallbrook average from 34°F to 27°F.

The Gregory Canyon site also corresponds to U.S. Department of Agriculture (USDA) hardiness zone 9b, which indicates a minimum average temperature of 25°F to 30°F. By comparison, USDA hardiness zones in San Diego County, beginning immediately west of the Gregory Canyon property range from 10a (minimum average temperature of 30°F to 35°F), 10b (minimum average temperature of 35°F to 40°F), and 11 (minimum average temperature of 40°F to 45°F). Of the five USDA hardiness zones characterizing San Diego County, three are more temperate than the Gregory Canyon site and two (mountain and desert areas) are less temperate than the Gregory Canyon site. Because the site's climate zone is less temperate than the County's median hardiness zone and the median Sunset climate zone, the climate factor on the LARA model is rated as "moderate."

On-site Soil Quality

The U.S. Department of Agriculture Soil Conservation Service (SCS) has developed a nomenclature system that generally describes soil types, their physical characteristics and limitations, and their suitability for agriculture and other uses. Capability groupings are used by the SCS to group soils according to their general suitability for most kinds of field crops. In the capability system, all kinds of soils are grouped at three levels: the capability class, subclass, and unit. Capability classes are designated by Roman numerals I through VIII and they indicate progressively greater limitations and narrower choices for practical use. For instance, Class I soils have few limitations that restrict their use, whereas Class VIII soils and landforms have limitations that preclude their use for commercial agriculture and restrict their use to recreation, wildlife, water supply or aesthetic purposes.

The capability subclasses, of which there are four, represent further limitations on the use of the soil resources of a given area. Such limitations include the risk of erosion, extensive soil wetness, and climatic limitations which affect the suitability of the soil for agricultural uses. The Class I soils on the Gregory Canyon site, however, have no subclasses since, by definition, they have few limitations to their use.

Capability units are soil groups within the subclasses which further define soil characteristics and/or limitations to their use. Again, the on-site Class I soils do not exhibit these limitations and, in general, soils in capability groups I and II are classified as "prime" soils. Prime soils, as defined by the Williamson Act, are soils that are in capability classes I and II or produce $200 or more gross annual income three years out of five. There are about 26,700 acres of Class I and 104,930 acres of Class II soils in San Diego County.

Another general indicator of the agricultural value of soils is the Storie Index. The Storie Index expresses numerically the relative degree of suitability, or grade, of a soil for intensive agriculture based on soil characteristics. Soils of grade 1 (i.e., Index rating of 80 to 100) have few or no limitations restricting their use for crops, whereas at the other end of the scale, grade 6 (i.e., Index rating of less than ten) consists of soils that generally are not suited to farming. All six Storie index rating grades are represented on the project site. However, the only grade 1 soils are the Visalia loam units that are also classified as prime due to their Class I and II designations.

Reference maps produced by the California Department of Conservation (DOC) Farmland Mapping and Monitoring Program (FMMP) may also be used to identify agricultural resources and areas with high quality soils. **Figure 5**, *Gregory Canyon Area FMMP Map*, illustrates the FMMP designations for the Gregory Canyon property. As shown in Figure 5, the site contains small areas of FMMP designated areas, including Farmland of Statewide Importance and Unique Farmland, which are contiguous to broader and similarly designated farmland to the west of the Gregory Canyon property. These designated areas are located south of SR 76. Because of the large scale of the FMMP map, it is not possible to determine the acreages of the designated areas within the Gregory Canyon property. The minimum mapping unit under the FMMP is 10 acres and land smaller than 10 acres is incorporated into the surrounding map classifications.

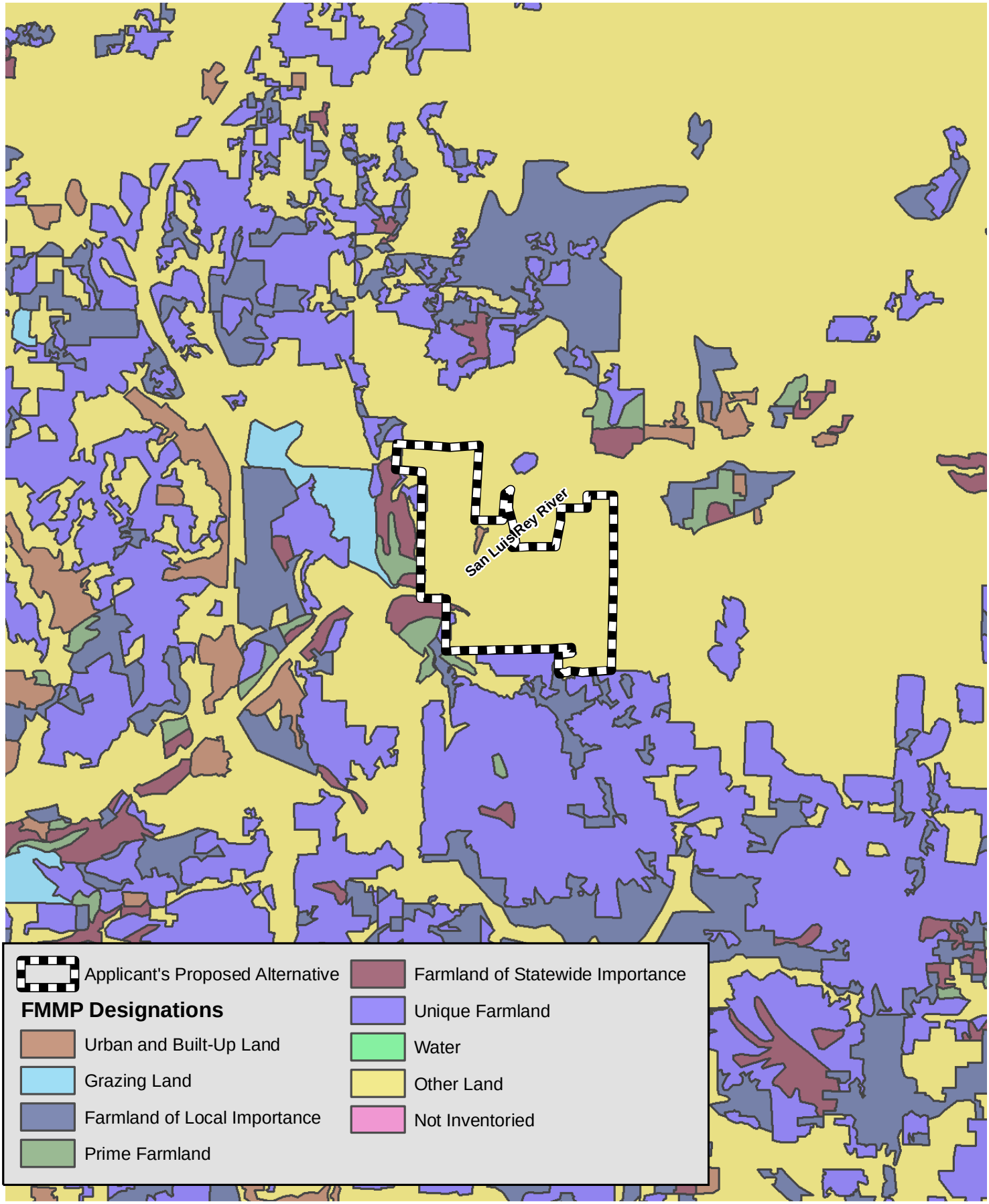
The FMMP map designates the location of the former Lucio Family dairy operation as Urban and Built-Up Land, which is defined as land that is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

The remainder (majority) of the site is designated on the FMMP map as Other Land, which is defined as low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty acres.

Among other factors, FMMP classifications are based on soils types and active cultivation in accordance with FMMP criteria. Three soil associations are present in and surrounding the San Luis Rey River Valley between I-15 and the Pala Townsite. Soils on the valley floor are of the Visalia-Tujunga Association. Upland soils are of the Cieneba-Fallbrook and Las Posas Associations. Distribution and areal extent is primarily determined by underlying geologic formations and topography. The on-site soils and their associated acreages on the Gregory Canyon property are listed on **Table 2**, *Gregory Canyon Soils Resources*. On-site soils types are illustrated in **Figure 6**, *Gregory Canyon Area Soils*. **Table 3**, *FMMP Candidate Soils,* summarizes the acreages of soils that are considered, by type, to be candidate Prime Farmland or Farmland of Statewide Importance soils.

Historical photos indicate that no cultivation occurred in the bottom area of the site near the river, which are characterized by VaA, TuB, and FeE2 soils, prior to and during 1989. However, some grass production for hay, similar to the property west of the Gregory Canyon property occurred in 1995 and 2003, although the dairy farm in proximity to this area closed in 1984. To the west, immediately adjacent to the former hay operation, the Pala Rey Ranch currently grows grass/hay and crops similar to sorghum, which provide feed for their cattle operation.

As indicated in Table 2 and illustrated in Figure 4, soils are diverse over the extent of the site. Soils are also diverse with respect to capability and crop suitability. Higher quality on-site soils consist of approximately 69 acres of Visalia sandy loam (VaA) with 0 to 2 percent slopes and 6.8 acres of Visalia sandy loam (VaB), with 2 to 5 percent slopes. The site also contains approximately 147.1 acres of Tujunga sand (TuB) with 0 to 5 percent slopes soils. VaA and TuB soils to the north and south of the San Luis Rey River, were used for the cultivation of hay or pastures for former dairy operations on the property. The VaA and TuB soils are considered by the FMMP to be candidate Prime Farmland soils (if cultivated in accordance with FMMP criteria).



PCR

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Gregory Canyon Area FMMP Map

Gregory Canyon

Source: Aerial Express, 2009; FMMP, 2002; PCR Services Corporation, 2012.

FIGURE

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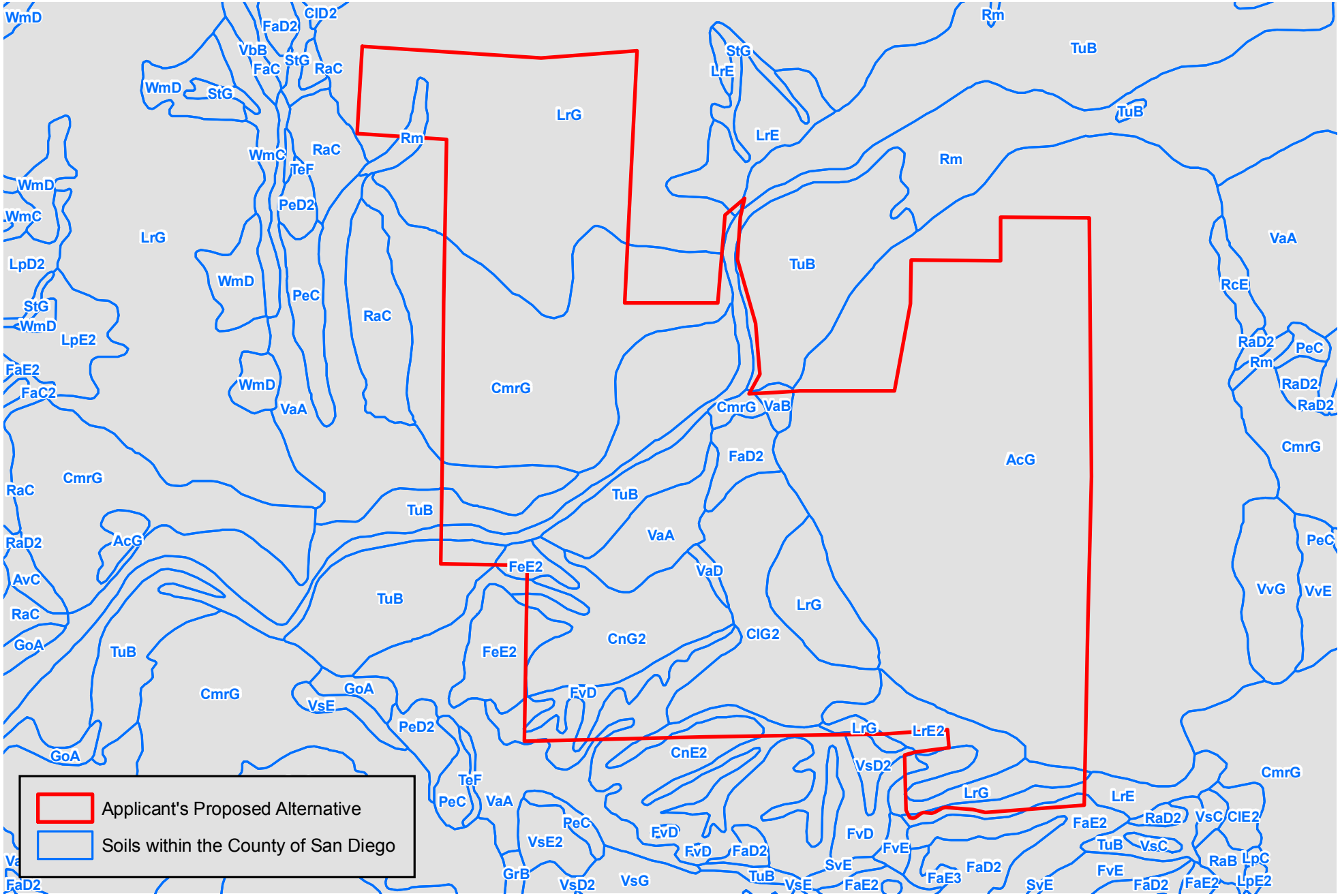

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Gregory Canyon Area Soils

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

6

Table 2

Gregory Canyon Site Soil Resources

Soil Type	Condition	Existing Acreage
G	Acid igneous rock land	657.4
LrG	Las Posas stony fine sandy loam, 30 to 65 percent slopes	341.8
CmrG	Cieneba very rocky coarse sandy loam, 30 to 75 percent slopes	192.2
TuB[b]	Tujunga sand, 0 to 5 percent slopes	147.1
ClG2	Cieneba coarse sandy loam, 30 to 65 percent slopes, eroded	109.4
CnG2	Cieneba-Fallbrook rocky sandy loam, 30 to 65 percent slopes	94.5
VaA[a]	Visalia sandy loam, 0 to 2 percent slopes	69.0
CnE2	Cieneba-Fallbrook rocky sandy loam, 9 to 30 percent slopes	36.5
LrE2	Las Posas stony fine sandy loam, 9 to 30 percent slopes, eroded	30.6
Rm	Riverwash	28.1
FvD	Fallbrook-Vista sandy loam, 9 to 15 percent slopes	26.4
FaD2	Fallbrook sandy loam, 9 to 15 percent slopes, eroded	22.5
FeE2	Fallbrook sandy loam, 15 to 30 percent slopes, eroded	9.0
LrE	Las Posas stony fine sandy loam, 9 to 30 percent slopes	7.2
VaB[a]	Visalia sandy loam, 2 to 5 percent slopes	6.8
VaD	Visalia sandy loam, 9 to 15 percent slopes	4.8
VsD2	Vista coarse sandy loam, 9 to 15 percent slopes, eroded	0.2
	TOTAL	1,783.5[c]

[a] *Prime Farmland under the California Department of Conservation Farmland Mapping and Monitoring Program, Soil Candidate Listing for Prime Farmland in San Diego County .*

[b] *Farmland of Statewide Importance under the California Department of Conservation Farmland Mapping and Monitoring Program, Soil Candidate Listing for Farmland of Statewide Importance in San Diego County*

[c] *Total acreage includes approximately 13 acres owned by SDG&E within the site boundary.*

Source: Acreages are derived from PCR Services Corporation mapping based on SANDAG GIS Data, 1997

If irrigated, VaA soils are considered suitable (good) for avocados, citrus, truck crops, and flowers as well as suitable (fair) for tomatoes. A pocket of Visalia loam (VaB) is located near the mouth of Gregory Canyon. With irrigation, this soil is considered good for avocados, citrus, truck crops, and flowers. If irrigated, TuB is suitable (good) for avocados and flowers as well as suitable (fair) for truck crops.

Some Fallbrook loam (FeE2), which is not listed as a candidate Prime or Important Farmland soil by the FMMP, is located on uplands at the toe of the ridge system along the western boundary. The knoll near the proposed ancillary facilities location is Cieneba loam (CmrG).

The western slopes of Gregory Canyon at the landfill site and the mountain above are made up of acid igneous rock (AcG), with a steep landform ordinarily precluding commercial crop production, and not listed as candidate soils under the FMMP Prime or Important Soils classifications. The eastern slope of Gregory Canyon is mostly Las Posas loam (LrG), with very severe limitations making them generally unsuited to cultivation. This soil is not listed as a candidate under the FMMP Prime or Important soils classifications. The remainder of the eastern canyon slope is Cieneba loam (CIG2) which is not listed as candidate soil under

Table 3

FMMP Candidate Soils[a]

Soil Type	Condition	FMMP Category	Acres
VaA	0 to 2 percent slope	Prime Farmland	69
VaB	2 to 5 percent slope	Prime Farmland	6.8
Total Prime Farmland			75.8 acres
TuB	0 to 5 percent slope	Farmland of Statewide Importance	147.1 acres
		Total Prime and Important Farmlands	222.9 acres

[a] *Actual classification of candidate soils requires the active cultivation of soils under FMMP criteria. The former dairy operations may have grown grass or hay for dairy cattle feed, but lands were primarily used for pasture (FMMP California Department of Conservation, FMMP – Map Categories and Criteria (January 2012).*

Source: Acreages are derived from PCR Services Corporation mapping based on SANDAG GIS Data, 1997.

the FMMP Prime or Important soils classifications. These soils are, nevertheless, considered suitable (fair) for avocados.

Soils in the area of the proposed ancillary facilities are Fallbrook loam (FaD2). These are not considered candidate Prime Farmland or Farmland of Statewide Importance soils, and have severe limitations that reduce the choice of crops. However, these soils are suitable for avocados (fair), citrus, tomatoes, and flowers. These soils have been previously farmed, either in field crops or used as pasture.

The high ground north of SR 76 is evenly split between Cieneba loam (CmrG) and Las Posas loam (LrG). Neither of these soil types are considered candidate Prime Farmland or Farmland of Statewide Importance soils, and both have severe limitations. These soils are unsuited to cultivation and are not considered arable.

As shown in Table 3, above, total soils considered candidate Prime Farmland soils comprise approximately 75.8 acres, which would represent approximately 4.3 percent of the total land area (75.8 acres ÷ 1,753.5 acres). Total soils considered candidate Farmland of Statewide Importance soils would represent approximately 8.4 percent of the total land area (147.1 ÷ 1,753.5 acres). The total area containing candidate Prime Farmland or Farmland of Statewide Importance soils comprises approximately 222.9 acres or 12.7 percent of the total land area (222.9 ÷ 1,753.5 acres). In addition, other soils on the site, such as Fallbrook loam (FaD2) are capable of supporting crops, such as avocados, but are not considered candidate Prime Farmland or Farmland of Statewide Importance soils.

VaA and TuB soils along the San Luis Rey River would be maintained as open space and, largely undisturbed. An approximately 1.3-acre section of VaA soil at the western edge of the property, which is designated as Farmland of Statewide Importance on the current FMMP map, is located in the area of the proposed Borrow/Stockpile Area A. With the development of the Applicant's Proposed Project Alternative at the Gregory Canyon site, and implementation of the conditions of Proposition C, a majority of the site would be dedicated for the long-term preservation of sensitive habitat and species and would therefore, be unavailable for any future agricultural production.

In conclusion, although the great majority of the Gregory Canyon property consists of non-arable soils, approximately 222.9 acres or 12.7 percent of the site is considered to have high quality soils. Therefore, for these areas of the site, soils are rated "high" on the LARA model factor scale.

Surrounding Land Uses

Surrounding land use is a factor in determining the importance of an agricultural resource because surrounding land uses that are compatible with agriculture uses improve a site's attractiveness due to lower expectations for nuisance issues associated with agricultural activities. Surrounding land uses within the site's zone of influence consist of developed agricultural properties to the west and south (Pala Rey Ranch, San Luis Rey Ranch and Pankey Ranch) and sparser agricultural development to the north and east. Off-site agricultural uses are depicted in **Figure 7**, *Gregory Canyon Area – General Plan Update Designated Land Uses*. As shown therein, the site is surrounded by a variety of designated Rural Lands (RL-40 and RL-20), Semi-rural Residential (SR-4), Public/Semi-public facilities, and Tribal Lands. With the exception of a Public/Semi-public parcel to the north/northwest, all of these designated areas would allow agriculture.

Figure 8, *Agricultural Preserves Contracts*, illustrates the location of Williamson Contract lands and Agricultural Preserves with relation to the Gregory Canyon property. As shown in Figure 8, these agricultural lands are concentrated primarily to the west and south of the Gregory Canyon property.

Mapping based on SANDAG information (2012) illustrate the agricultural commodities common to the Gregory Canyon property and the surrounding area (see **Figure 9**, *Gregory Canyon Area – Agricultural Commodities*). No agricultural commodities originate from the Gregory Canyon property. However, agricultural commodities originating in the surrounding area include avocado groves, row crops, oats, orange groves, pears, tomato crops, pasture lands, and non-greenhouse plants to the west. Commodities to the south consist primarily of avocado orchards.

The FMMP Map shown in Figure 5 illustrates the current, mapped FMMP designations for the Gregory Canyon property and surrounding area. As shown in Figure 5, small sections of Farmland of Statewide Importance and Unique Farmland within the Gregory Canyon property are located contiguous to broader and similarly designated farmland to the west of the Gregory Canyon property line.

Based on the State's current FMMP map for the area, the area immediately to the west of the Gregory Canyon property is designated as Prime Farmland and Farmland of Statewide Importance. Information provided in Figure 6 also indicates broad areas of VaA (Prime farmland) and TuB (Farmland of Statewide Importance) to the west of the Gregory Canyon property on the Pala Rey Ranch, San Luis Rey Ranch, and Pankey Ranch properties. These soils types would be consistent with the FMMP map designations.

Directly to the south of the Gregory Canyon property are citrus and avocado groves in an area designated as Unique Farmland on the FMMP maps. Areas to the north and east of the Gregory Canyon property are generally shown as Other Land, which is defined as land not included in any other mapping category such as low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than 40 acres.

Overall, surrounding areas to the west and south of the Gregory Canyon property are heavily cultivated and the areas to the north and east are minimally cultivated. This pattern of development indicates richer soils or climate conditions, or water availability to the west and south and poor soils or climate conditions, or water availability to the north and east. The Gregory Canyon property does not have any existing agricultural operations. However, the proximity of the Gregory Canyon property to active agricultural lands improves the attractiveness of the Gregory Canyon property, due to lower expectations for nuisance issues associated with agricultural activities, as an agricultural site. Therefore, the LARA Model Rating with respect to surrounding land uses is considered to be "high."

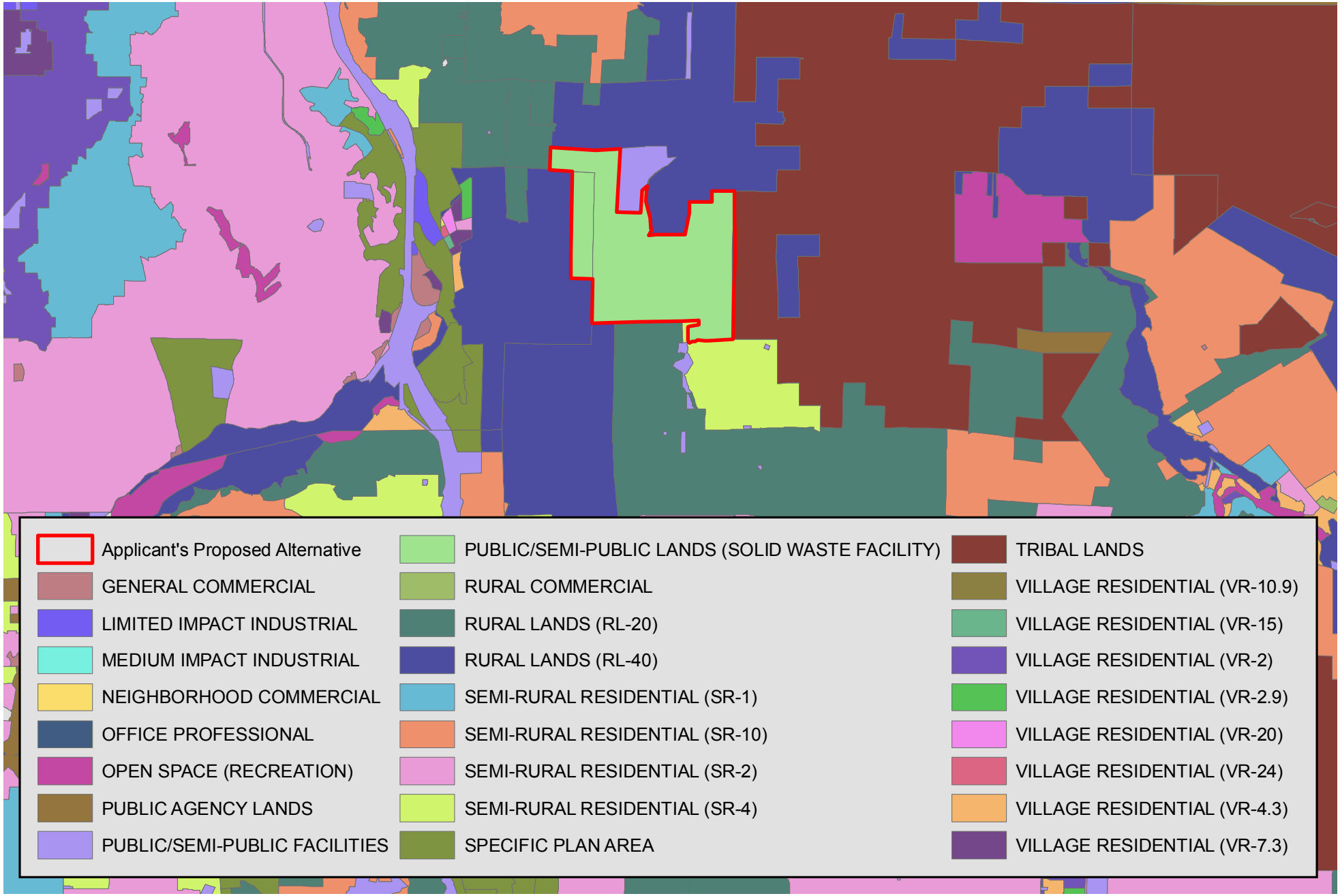
Land Use Consistency

As discussed above, the Gregory Canyon property site is designated in the County's General Plan as a Public/Semi-Public Solid Waste Facility use and is zoned SWF (Solid Waste Facility). The zoning of the property is illustrated in **Figure 10,** *Gregory Canyon Area – Zoning in San Diego County Unincorporated Areas*. The Gregory Canyon property is also designated as a "reserved proposed landfill site" in the San Diego County 2005 Siting Element. Upon development, approximately 308 acres of the approximately 1,770-acre site, or approximately 17 percent of the site, would be used for landfill activities. Proposition C, which amended the General Plan and Zoning Code to reflect the approval of this property for a landfill, requires that a minimum of 1,313 acres of the site be maintained as permanent open space for the long-term preservation of sensitive habitat and species. In addition, the development of the landfill would also result in the implementation of a HRRMP. The HRRMP would restore and create approximately 250 acres of sensitive native species in the river valley. Because this area contains the site's most arable soils, the HRRMP would thus preclude agricultural uses in the portion of the property containing the property's highest agricultural potential. At the end of the approximately 30-year operation of the landfill, the portion of the site used for the landfill operation would remain as permanent, undeveloped open space. Agriculture use of the property would be inconsistent with the underlying designation and intended purpose of the property. Therefore, the LARA Model Factor Rating with respect to land use consistency would be considered to be "low."

Slope

The existing slopes on the lower area of Gregory Canyon are approximately 5:1 (horizontal-to-vertical ratio), becoming 2:1 to the east, and are 1:1 and steeper on the upper part of the eastern slope. The western flank of the canyon is defined by a rounded ridgeline, with rather uniform slopes at inclinations of 2:1 to 3:1.

The areas along the river basin that have supported dairy operations and pasture land are the flattest terrain of the site. However, the overall site is generally steep and not suitable for a broad range or variety of cultivars. Gregory Mountain rises steeply to a maximum elevation of 1,844 feet above mean sea level (amsl). The western ridge rises to a maximum elevation of 940 feet amsl. The thalweg (i.e., the flow line) of the canyon itself drops in elevation from 920 ft amsl at the head of the canyon on the south to 320 feet amsl on its northern terminus into the San Luis Rey River. The topography of the Gregory Canyon property is described in greater detail in Section 3.6, Geology and Soils, of the EIS. The relative relief of the site is also indicated in Table 2, *Onsite Soils Resources*, in which the majority of the site is covered by soils defined by steep terrain. Although the majority of the site is characterized by moderate and steep slopes, because the flat areas are located in the former agricultural portion of the site, the slope rating for the site is considered to be "moderate."



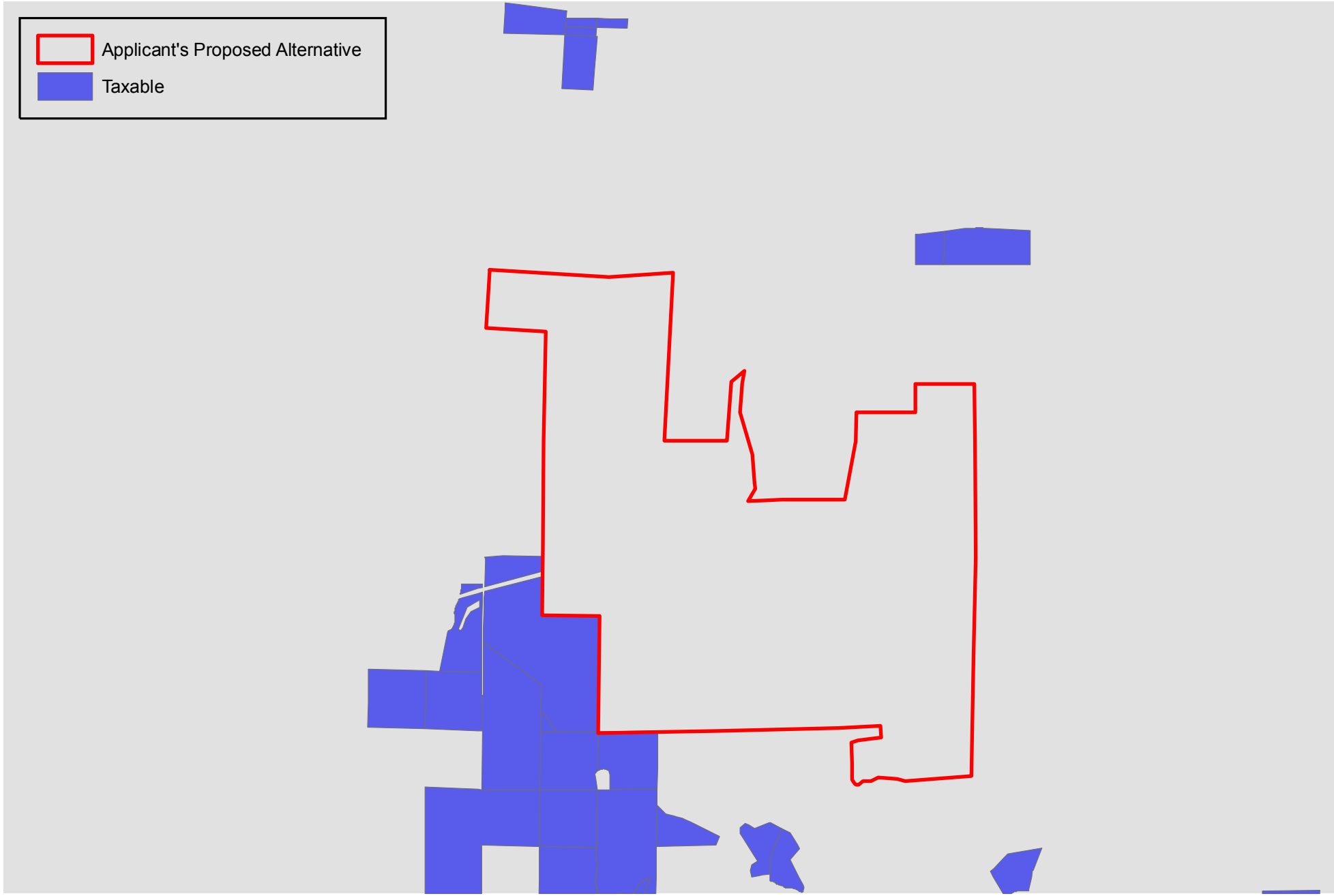
Gregory Canyon Area General Plan Update Designated Land Uses

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

7



N

0 3,000 6,000 Feet

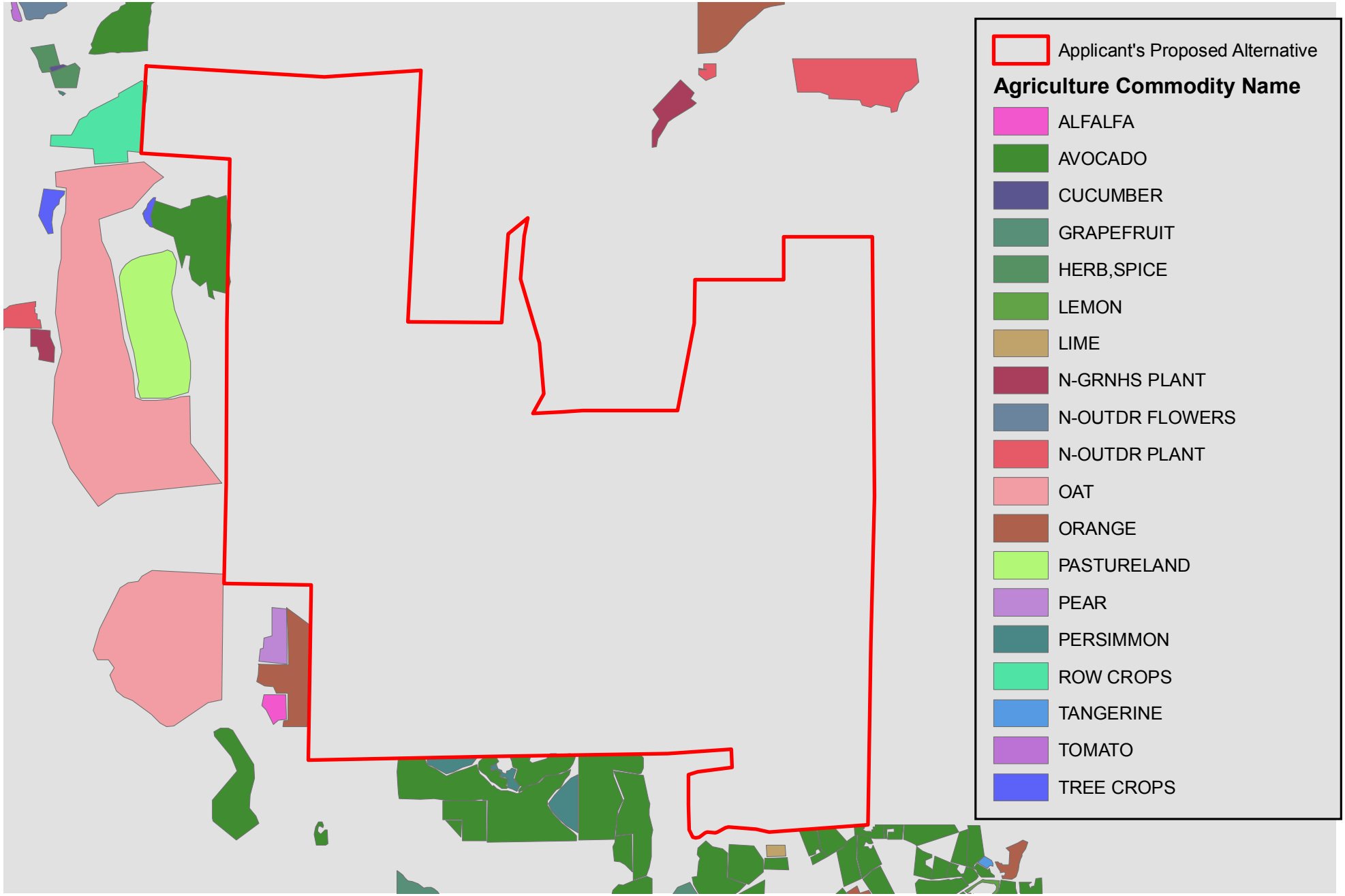
Gregory Canyon Area Agricultural Preserves Contracts

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

8



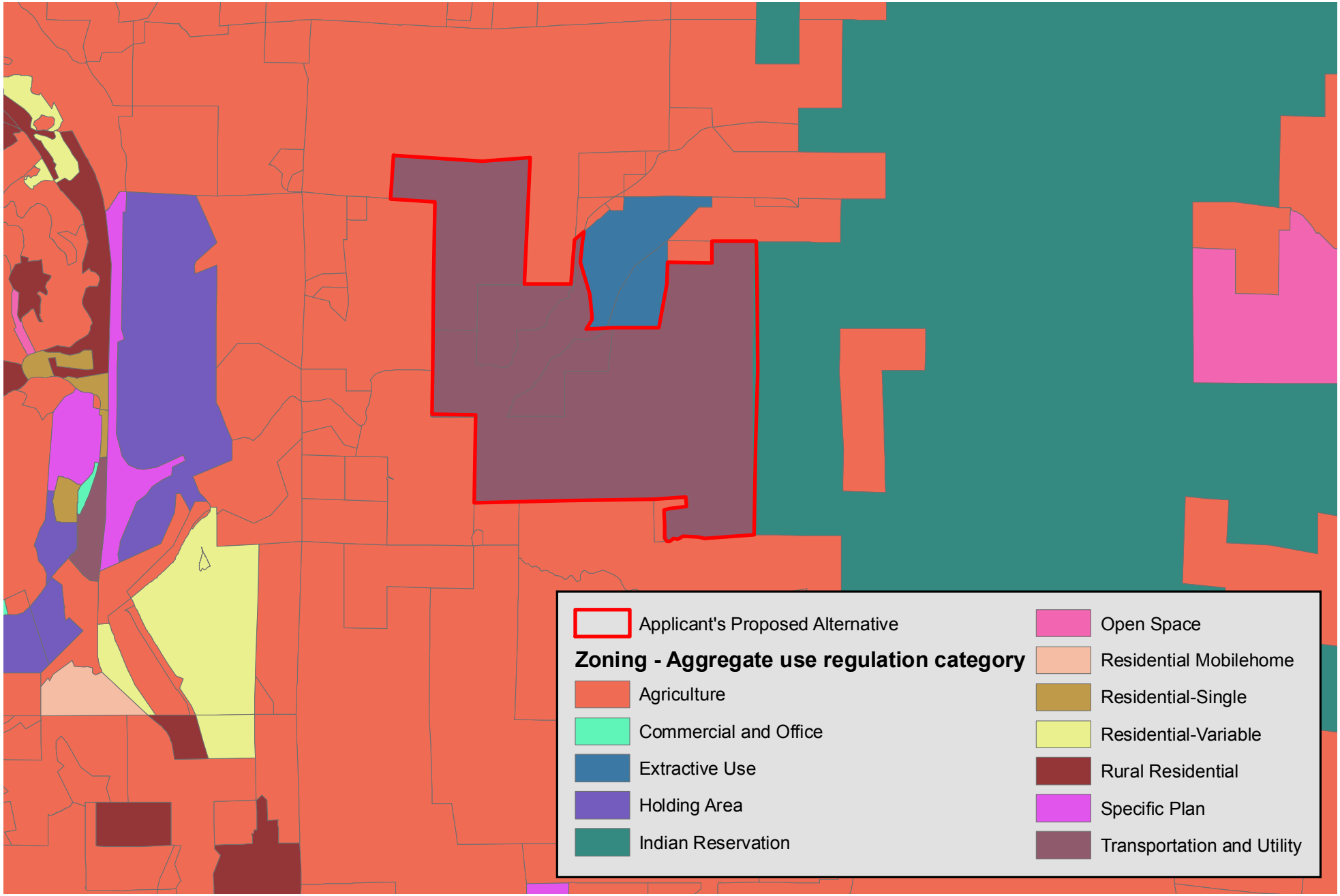
Gregory Canyon Area Agricultural Commodities

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

9



Gregory Canyon Area Zoning in San Diego County Unincorporated Areas

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

10

Summary of LARA Analysis for the Gregory Canyon Property

In order for the site to be considered an important agricultural resource based on the LARA model, all three "required factors" (water, climate and soil) must receive a "high" or "moderate" score. If two "required factors" are rated as "moderate," at least two "complementary" factors (surrounding land uses, land use consistency, and slope) must be rated "high" in order for the property to be considered an important agricultural resource. **Table 4**, *LARA Rating Scenarios*, summarizes the various combinations that can occur in the rating of a property, and the interpretation of the importance of farmland based on the different combinations of "required factors" and "complementary factors."

Table 4

LARA Ratings Scenarios

	LARA Model Results		
Possible Scenarios	**Required Factors**	**Complementary Factors**	**LARA Model Interpretation**
Scenario 1	All three factors rated high	At least one factor rated high or moderate	The site is an important agricultural resource
Scenario 2	Two factors rated high, one factor rated moderate	At least two factors rated high or moderate	
Scenario 3	One factor rated high, two factors rated moderate	At least two factors rated high	
Scenario 4	All factors rated moderate	All factors rated high	
Scenario 5	At least one factor rated low importance	N/A	The site is not an important agricultural resource
Scenario 6	All other model results		

Source: County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements, Section 2.1, Local Agricultural Resource Assessment (LARA) Model, 2007.

Table 5, *LARA Model Factor Rating for the Gregory Canyon Site*, provides a summary of the rating for each of the required factors, discussed above, for the Gregory Canyon property. As shown in Table 5, under "required factors," the Gregory Canyon property would have a "high" rating related to soil quality and "moderate" ratings related to climate and water. Under "complementary factors," the property would have a "low" rating related to land use consistency and a "moderate" rating related to slope. The property would have a "high" rating with regard to existing, adjacent agricultural land uses.

Under "required factors," the property's arable soils are located within the SLRMWD district, which provides no imported water or backup supply for irrigation. However, well water is available to the portion of the site supporting former dairy operations. Thus, water supply is considered "moderate." Climate conditions in the immediate area, which are characterized by relatively greater temperature extremes than other areas of North County, are considered "moderate." Soil quality in the portion of the property formerly used for dairy operations is considered "high," although the majority of the site has poorer quality soils and does not have a history of agricultural use.

Table 5

LARA Model Factor Ratings for the Gregory Canyon Site

Required Factors	LARA Model Rating		
	High	Moderate	Low
Water		X	
Climate		X	
Soil Quality	X		
Complementary Factors			
Surrounding Land Uses	X		
Land Use Consistency			X
Slope		X	

Source: PCR Services Corporation, 2012

With respect to "complementary factors," the portion of the site formerly used for agricultural purposes is contiguous to active, off-site farming operations to the west and is, therefore, considered "high." However, agricultural uses would not be consistent with the County's General Plan land use designation of the site (Public/Semi-Public, Solid Waste Facility), and the requirement under Proposition C for the preservation of 1,313 acres of open space. Within the open space, the HRRMP would restore and create approximately 250 acres of sensitive native species in the river valley. Because this area contains the site's most arable soils, the HRRMP would, thus preclude agricultural uses in the portion of the property containing the property's highest agricultural potential. Therefore, land use consistency is considered "low." The slope of the property varies from very steep mountain topography to flatter areas in the river basin. Because of the great variation over the site, slope is considered "moderate."

As shown in Table 5 the property would not have at least two high-rated complementary factors to qualify the property as an important agricultural resource and, as such, would be consistent with "Scenario 6," previously described in Table 4. Under Scenario 6 the property is determined to not be an important agricultural resource. It is noted, however, that this rating applies generally to the overall site. Small areas of the site that were previously used for agricultural purposes and are designated "agriculture" on Figure 1, Gregory Canyon Vegetation Map, above, contain arable soils and have water for limited crops. Based on site history, these may include grains, grasses, hay or other crops suitable for animal feed. If the LARA system of categorizing where applied to areas that were formerly cultivated, these may have a higher level of importance as agricultural resources.

B. Aspen Road Alternative

The Aspen Road Alternative site consists of approximately 456 acres, although the footprint of the landfill is expected to be approximately 165 acres. The site consists primarily of natural open space; however, some areas have been used for avocado farming and residential use.

Water

The Aspen Road property is located within the service area of the Rainbow Municipal Water District (RMWD), which allows the use of groundwater as well as municipal water sources, which support several

acres of existing groves within the property. Because the quality and quantity of groundwater can be variable, water availability is considered "moderate."

Climate

The Aspen Road Alternative site is located in a section of San Diego County described as "transitional" on the SANDAG-SanGIS Climate Zone map (see **Figure 11**, *Aspen Road Area Climate Zone*). The "transitional" zone is considered less temperate than the "coastal" zone, which is more amenable to a broader range crop types. However, the "coastal" zone is located nearer to the property than is the case with the Gregory Canyon property. Based on the 30-year average rainfall, the Aspen Road property receives an average of approximately 18 -21 inches per year (see **Figure 12**, *Aspen Road Area Average Rainfall - 30 Year Average*).

Because the property's climate zone is less temperate than the coastal zone, the climate factor on the LARA model is rated as "moderate."

On-site Soil Quality

As shown in **Figure 13***, Aspen Road Area Soils*, mapped soils of statewide importance are located within the central portion of the property. These include LrE (Las Posas series) and WmC (Wyman Series). The Las Posas series are not considered prime agricultural soils. The Wyman series are adequate for some agricultural crops, such as avocados. The FMMP may also be used to identify agricultural resources and areas with high quality soils. **Figure 14** - *Aspen Road Area FMMP Map*, illustrates the FMMP designations for the Aspen Road property. As shown in Figure 14, the property contains areas of FMMP-designated Farmland of Local Importance and Unique Farmland in the west central and the east central areas of the property that appear to comprise a total of approximately 20 percent of the property. The majority of the Aspen Road property consists of area designated as "other," which is generally undeveloped open space. However, because of the substantial presence of Farmland of Local Importance and Unique Farmland, soils are rated "high" on the LARA model factor scale.

Surrounding Land Uses

The area surrounding the Aspen Road Alternative site is characterized by low-intensity uses of a rural and/or agricultural nature. According to SANDAG data from 2009, existing land uses near the alternative site include rural residential, mobile home park, strip commercial, orchard/vineyard, open space park/preserve, reservoir, intensive agriculture, field crops, and vacant/undeveloped. The FMMP Map shown in Figure 14 illustrates the current, mapped FMMP designations for the Aspen Road property and surrounding area. As shown in Figure 14, sections of Farmland of Statewide Importance and Unique Farmland within the Aspen Road site are located contiguous to broader and similarly designated farmland to the east and west of the Aspen Road property line.

Based on the State's current FMMP map for the area, surrounding, contiguous areas directly to the east and west of the Aspen Road property are designated as Farmland of Local Importance and Unique Farmland. An area designated as Farmland of Statewide Importance is located approximately 800 feet to the southwest of the property.

San Diego County maps of agricultural commodities on the Aspen Road site and surrounding areas indicates that avocado groves are located in the north sector of the Aspen Road property. Additional groves are

located off site to the west, northwest, and southwest of the site. Mixed agricultural uses, including outdoor plants and flowers are located on adjacent properties to the east of the Aspen Road site. These designated areas are illustrated in **Figure 15,** *Aspen Road Area – Agriculture Commodities*. The proximity of the Aspen Road property to active agricultural lands improves the attractiveness of the Aspen Road property, due to lower expectations for nuisance issues associated with agricultural activities, as an agricultural site. Therefore, the LARA Model Rating with respect to surrounding land uses is considered to be "high."

Land Use Consistency

As illustrated in **Figure 16,** *Aspen Road Area - General Plan Update Designated Land Uses*, the central and larger portion of the Aspen Road property site is designated in the County's General Plan as a "Rural Lands," although a section along the east edge of the site is designated as "Semi-Rural Lands." These designations allow agricultural uses. **Figure 17**, *Aspen Road Area - Zoning in San Diego County Unincorporated Areas,* indicates that the entire site is designated for agriculture. Agricultural uses would be consistent with the underlying designation and intended purpose of the property. **Figure 18**, *Aspen Road Area - Agricultural Preserves Contracts*, shows the area of the property that is currently under an agricultural preserve contract. Agriculture use of the property would be consistent with the underlying designation and intended purpose of the property. Therefore, the LARA Model Factor Rating with respect to land use consistency would be rated as "high."

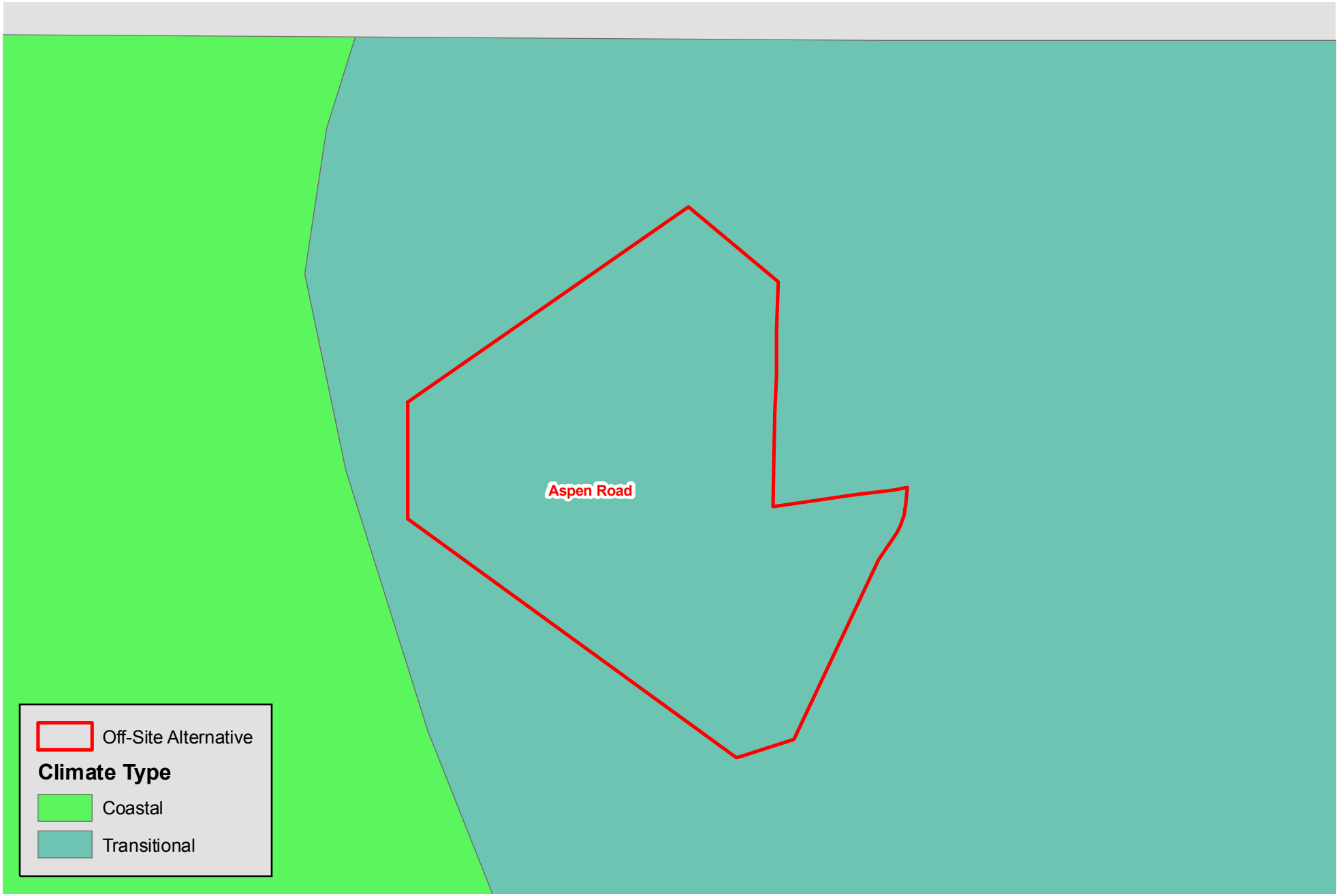
Slope

The Aspen Road Alternative site is located in a hilly area, characterized by some avocado groves in the north/central sector of the property. Although the majority of the site is characterized by moderate slopes, because some of the site is suitable for avocado farming, the slope rating for the site is considered to be "moderate."

Summary of LARA Analysis for the Aspen Road Alternative Site

In order for the site to be considered an important agricultural resource based on the LARA model, all three "required factors" (water, climate and soil) must receive a "high" or "moderate" score. If two "required factors" are rated as "moderate," at least two "complementary" factors (surrounding land uses, land use consistency, and slope) must be rated "high" in order for the property to be considered an important agricultural resource.

Table 6, *LARA Model Factor Ratings for the Aspen Road Alternative Site,* provides a summary of the rating for each of the required factors, discussed above, for the Aspen Road property. As shown in Table 6, under "required factors," the Aspen Road property would have a "high" rating with respect to soil quality and "moderate" ratings with respect to climate and water. Under "complementary factors," the property would have "high" ratings with respect to surrounding land use and consistency and a "moderate" rating related to slope. Therefore, the Aspen Road property is considered to be an important agricultural resource.



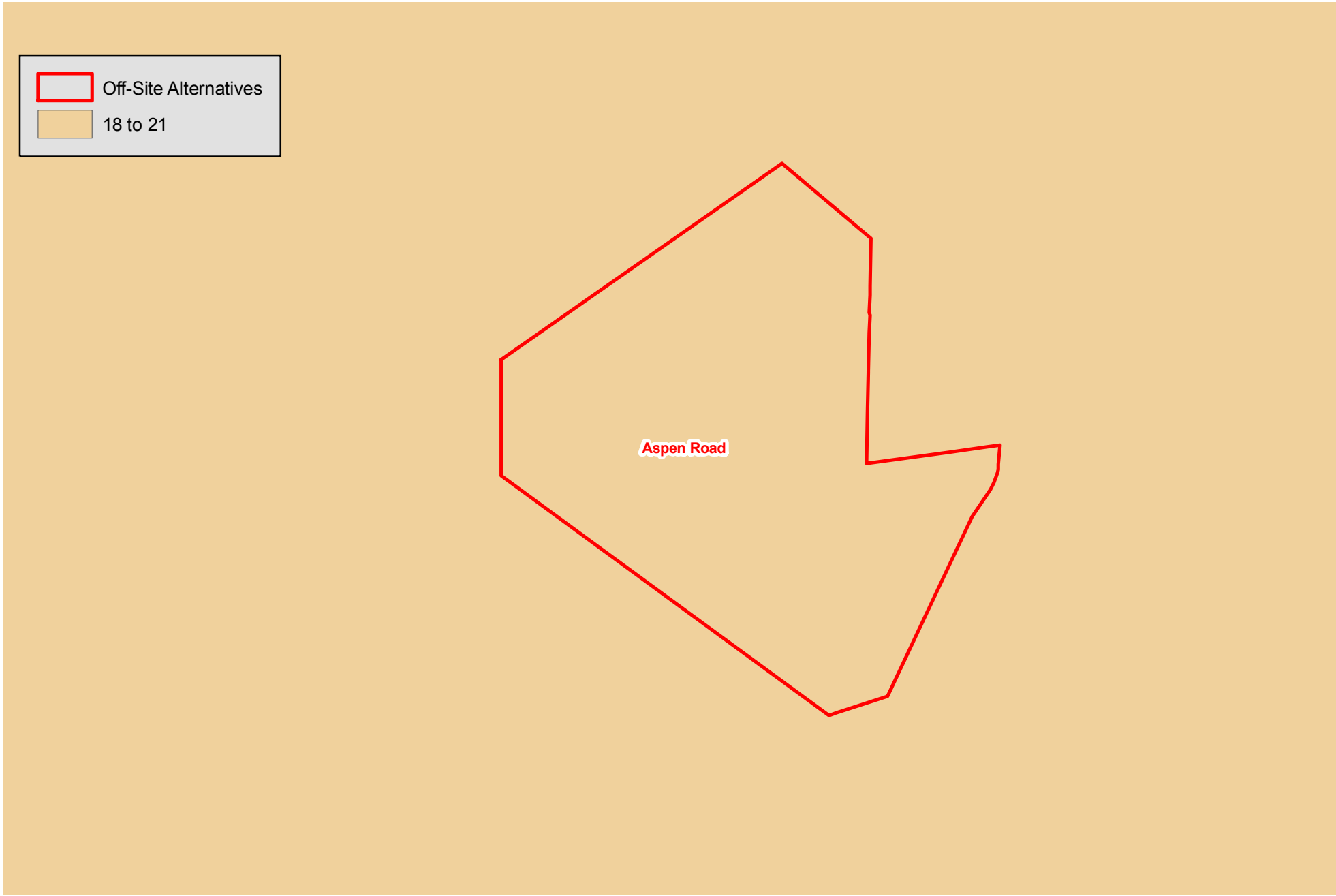
Aspen Road Area Climate Zone

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

11



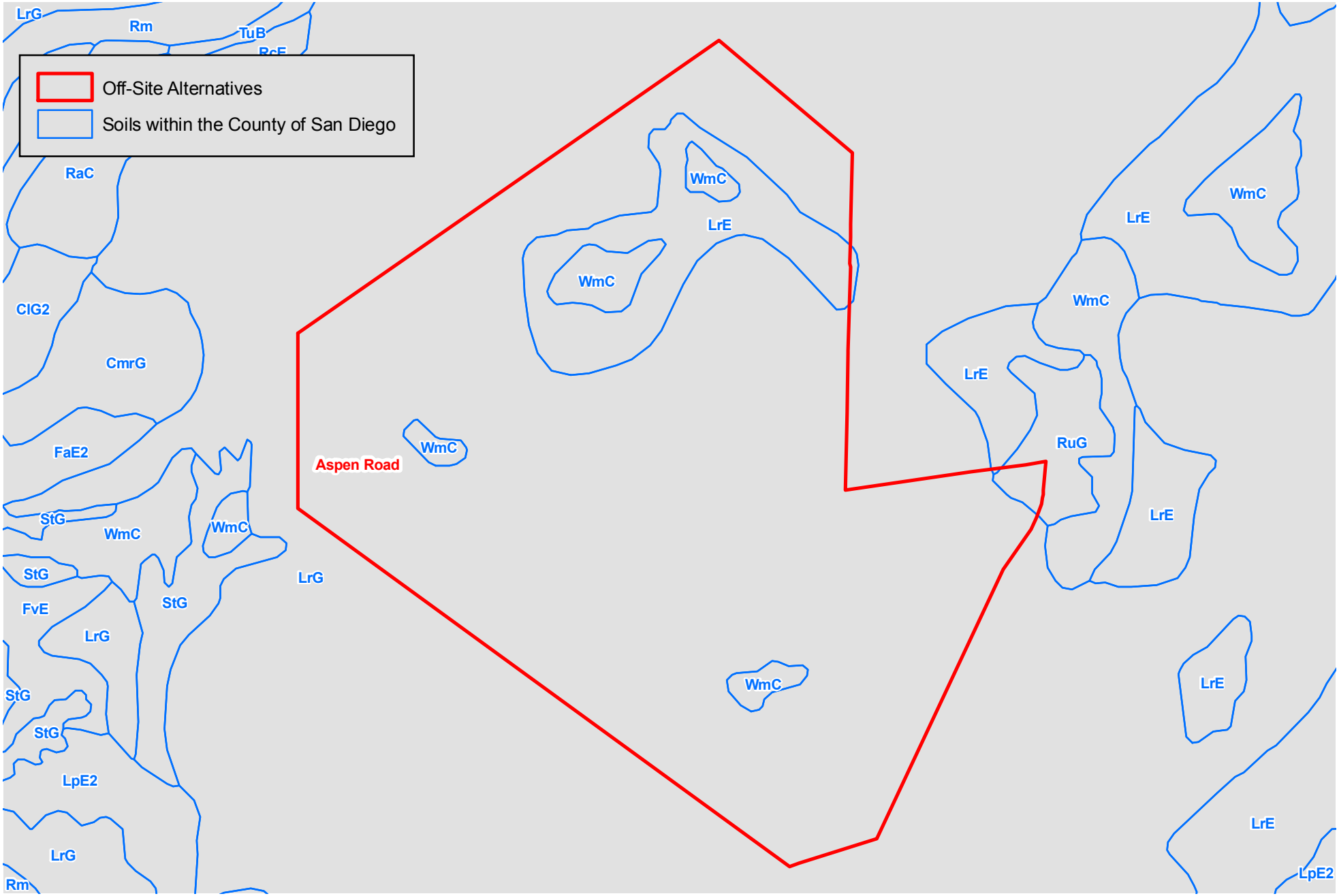
Aspen Road Area Average Rainfall - 30 Year Average

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

12



N

0 1,000 2,000 Feet

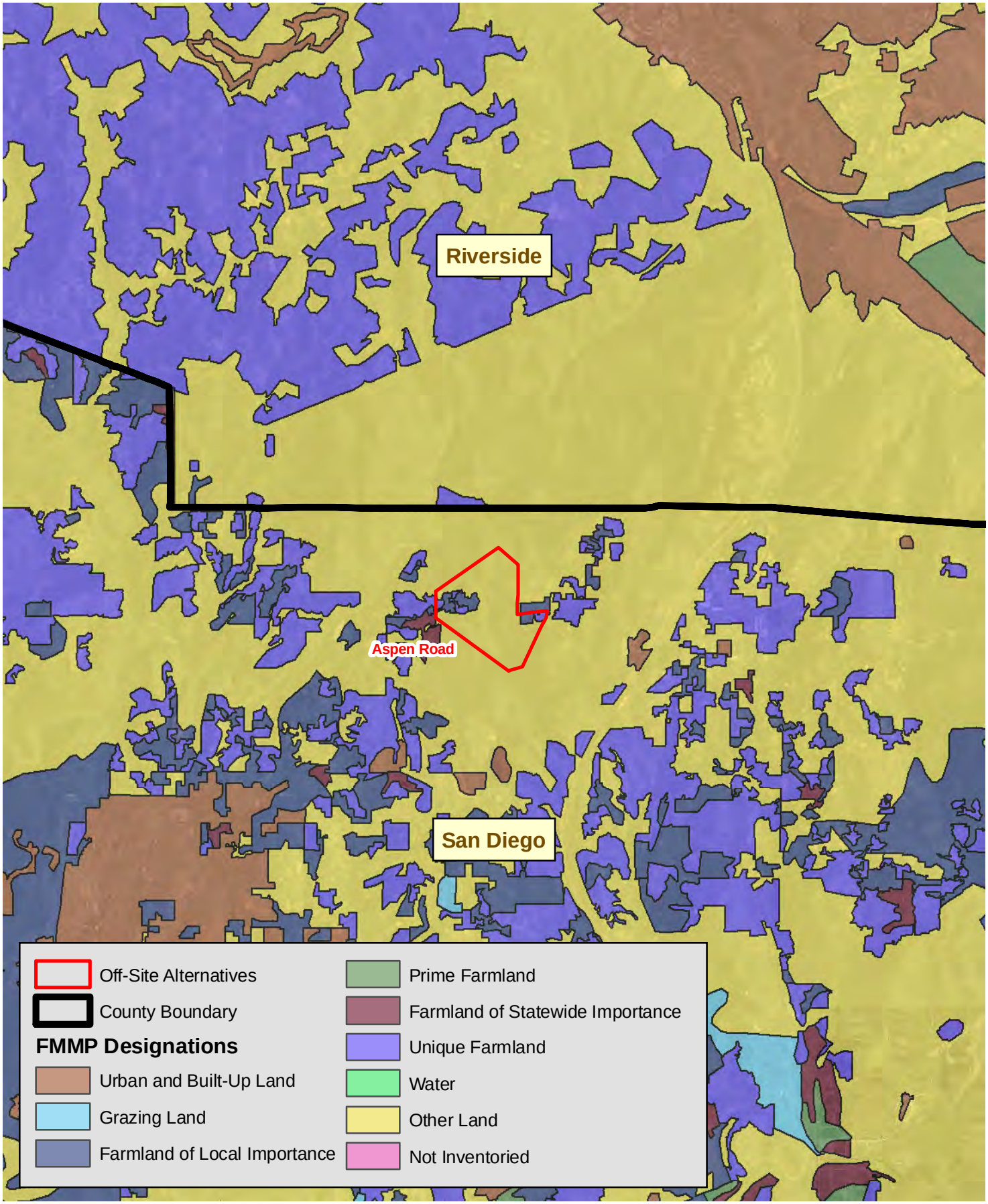
Aspen Road Area Soils

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

13



PCR

N

0 1.25 2.5 Miles

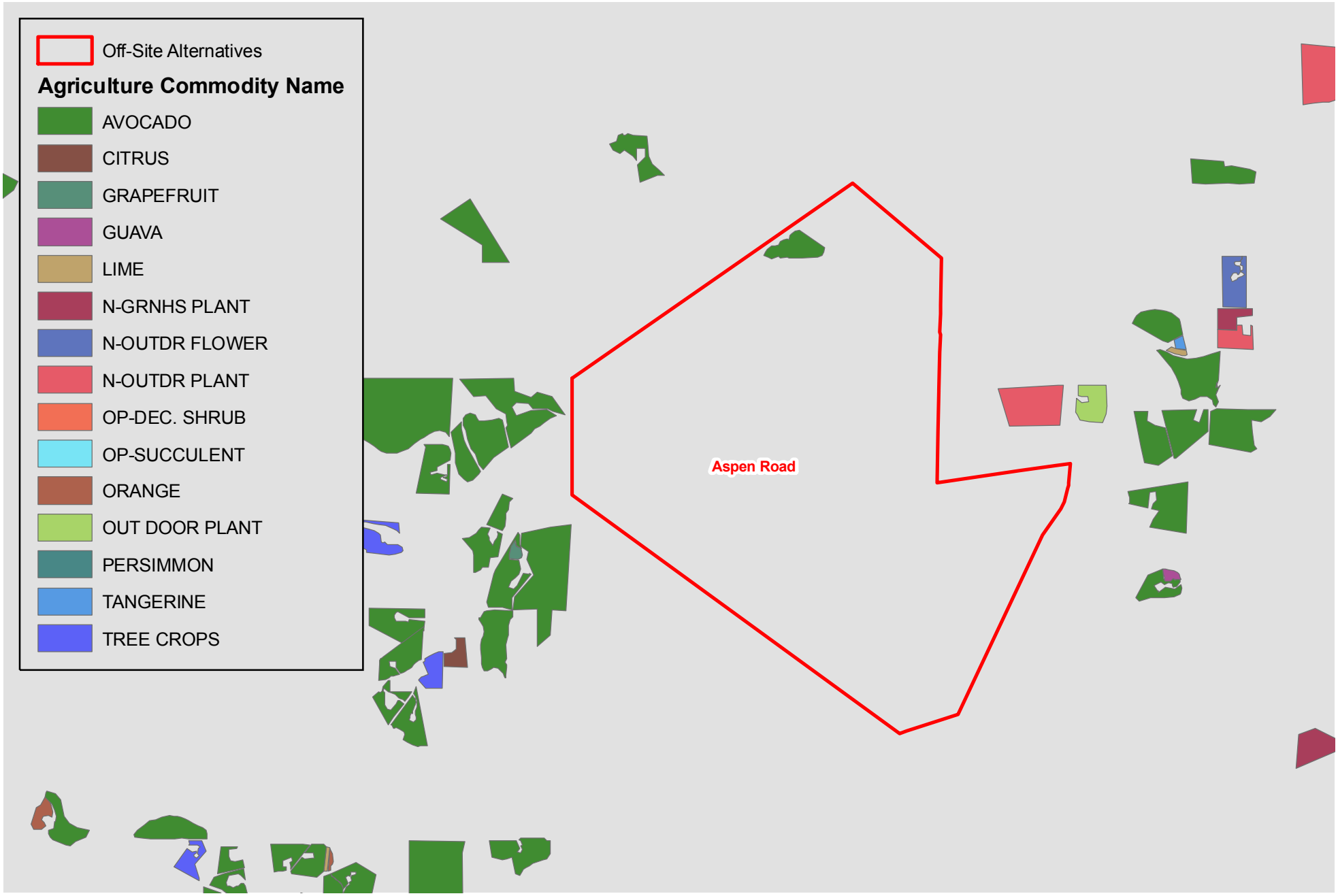
Aspen Road Area FMMP Map

Gregory Canyon

Source: Aerial Express, 2009; FMMP, 2002; PCR Services Corporation, 2012.

FIGURE

14



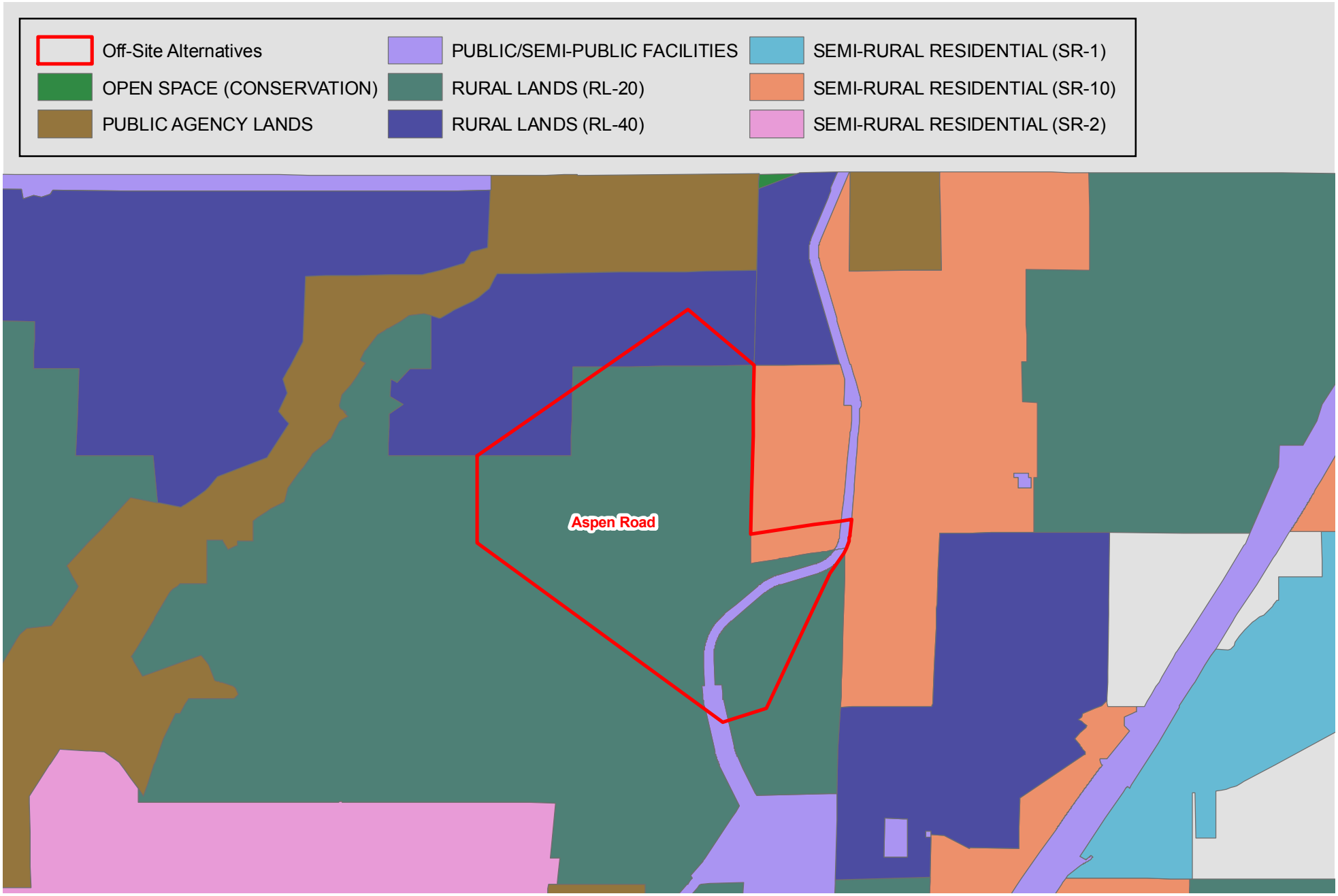
Aspen Road Area - Agriculture Commodities

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

15



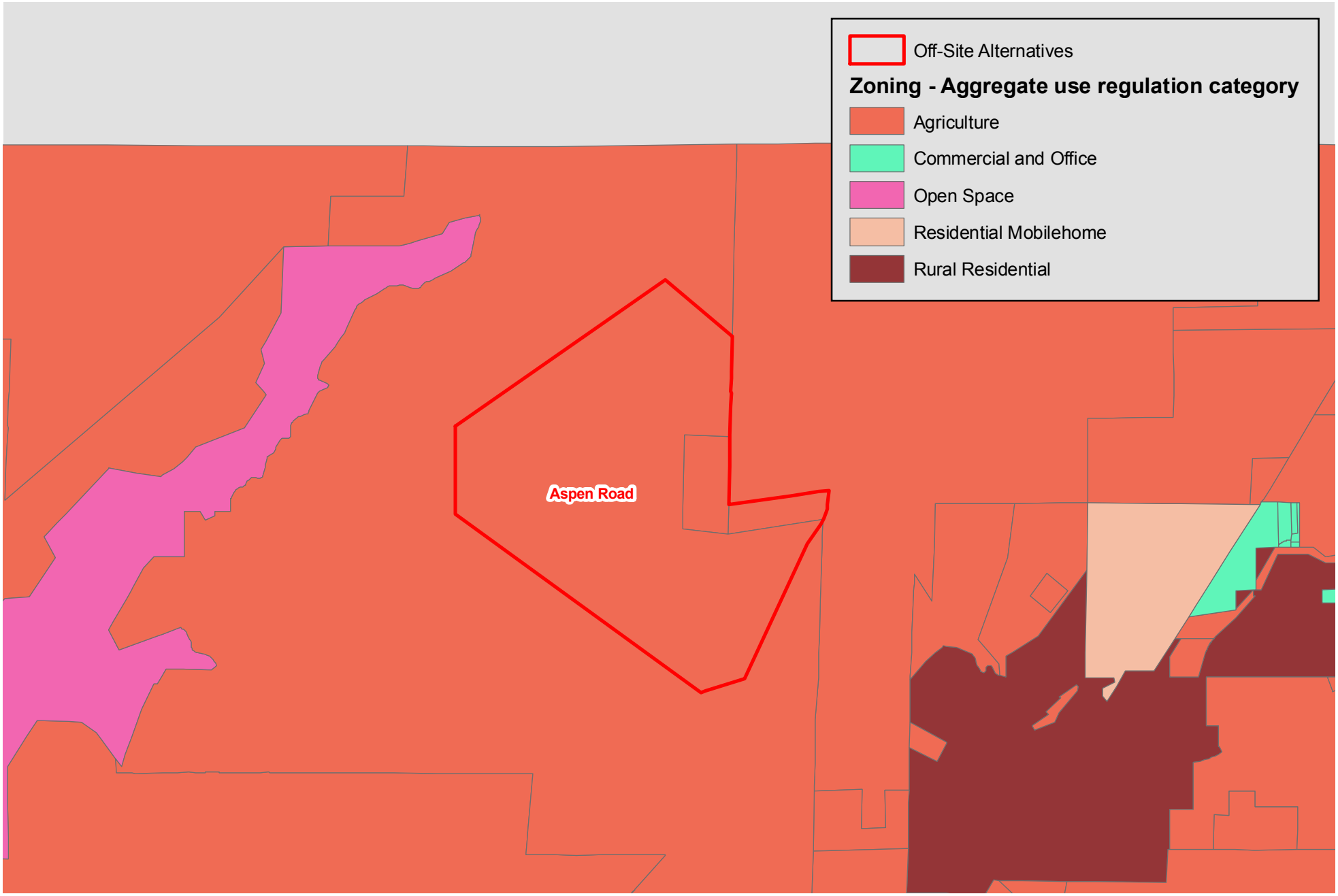
Aspen Road Area - General Plan Update Designated Land Uses

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

16



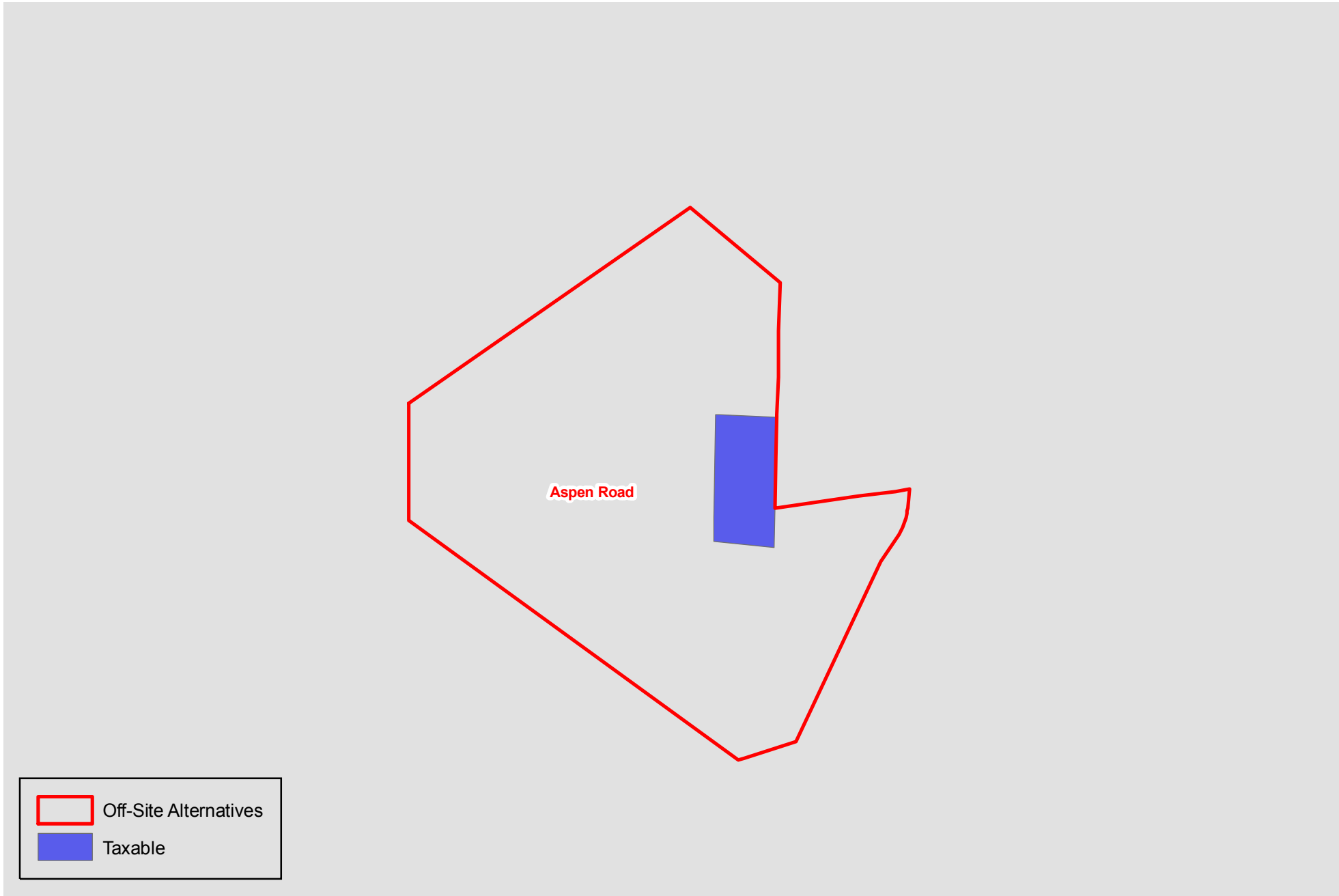
Aspen Road Area - Zoning for San Diego County Unincorporated Areas

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

17



Aspen Road Area Agricultural Preserves Contracts

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

18

Table 6

LARA Model Factor Ratings for the Aspen Road Alternative Site

	LARA Model Rating		
Required Factors	**High**	**Moderate**	**Low**
Water		X	
Climate		X	
Soil Quality	X		
Complementary Factors			
Surrounding Land Uses	X		
Land Use Consistency	X		
Slope		X	

Source: PCR Services Corporation, 2012

C. Gopher Canyon Road Alternative Site

The Gopher Canyon Road Alternative Site consists of approximately 474 acres, although the footprint of the landfill is expected to be approximately 180 acres. The site consists primarily of natural open space; although some infrastructure for a future residential subdivision occupies a portion of the property.

Water

The Gopher Canyon Road Alternative site is within the service area of the Rainbow Municipal Water District (RMWD) and Vallecitos Water District. The RMWD allows the use of groundwater as well as municipal water sources. The Vallecitos Water District provides municipal water to the surrounding area. However, because well water supply and quality can be variable and agricultural uses do not have a high priority with respect to municipal water sources, water availability is considered "moderate."

Climate

This area is also described as "Coastal" on the SANDAG-SanGIS Climate Zone map (see **Figure 19**, *Gopher Canyon Road Area Climate Zone*). The Coastal Zone, which has fewer temperature extremes than the Transitional Zone, is considered the most amenable to agriculture in San Diego County. Based on the 30-year average rainfall, the Gopher Canyon Road site receives an average of approximately 15 -18 inches per year (see **Figure 20**, *Gopher Canyon Road Area Average Rainfall - 30 year average*). Because the site's climate zone is more temperate than the Transitional Zone, the climate factor on the LARA model is rated as "high."

On-site Soil Quality

As shown in **Figure 21***, Gopher Canyon Area Soils*, on-site soils include LrG and LrE (both Las Posas series). Because of slope, porosity, and other factors, these soils are considered marginal for agricultural crops. The FMMP may also be used to identify agricultural resources and areas with high quality soils. As shown in **Figure 22,** *Gopher Canyon Road Area FMMP Map*, the property contains no FMMP designated areas. Because on site soils are not typically suitable for agricultural purposes, soils are rated "low" on the LARA model factor scale.

Surrounding Land Uses

The area surrounding the Gopher Canyon Road site is designated semi-rural, public agency, and rural lands. The area is characterized by agricultural and large-lot rural residential development, with other land uses/activities including quarries, day spas/resorts, and regional utility infrastructure for communications and water treatment. According to SANDAG data (2009), existing land uses near the Gopher Canyon Road site include the existing Cal-a-Vie Health Spa, to the northwest of the site (this appears as Semi-Rural Residential (SR-10) in the General Plan land use map. Existing vacant/undeveloped areas north of Gopher Canyon Road are proposed to be Semi-Rural Residential.

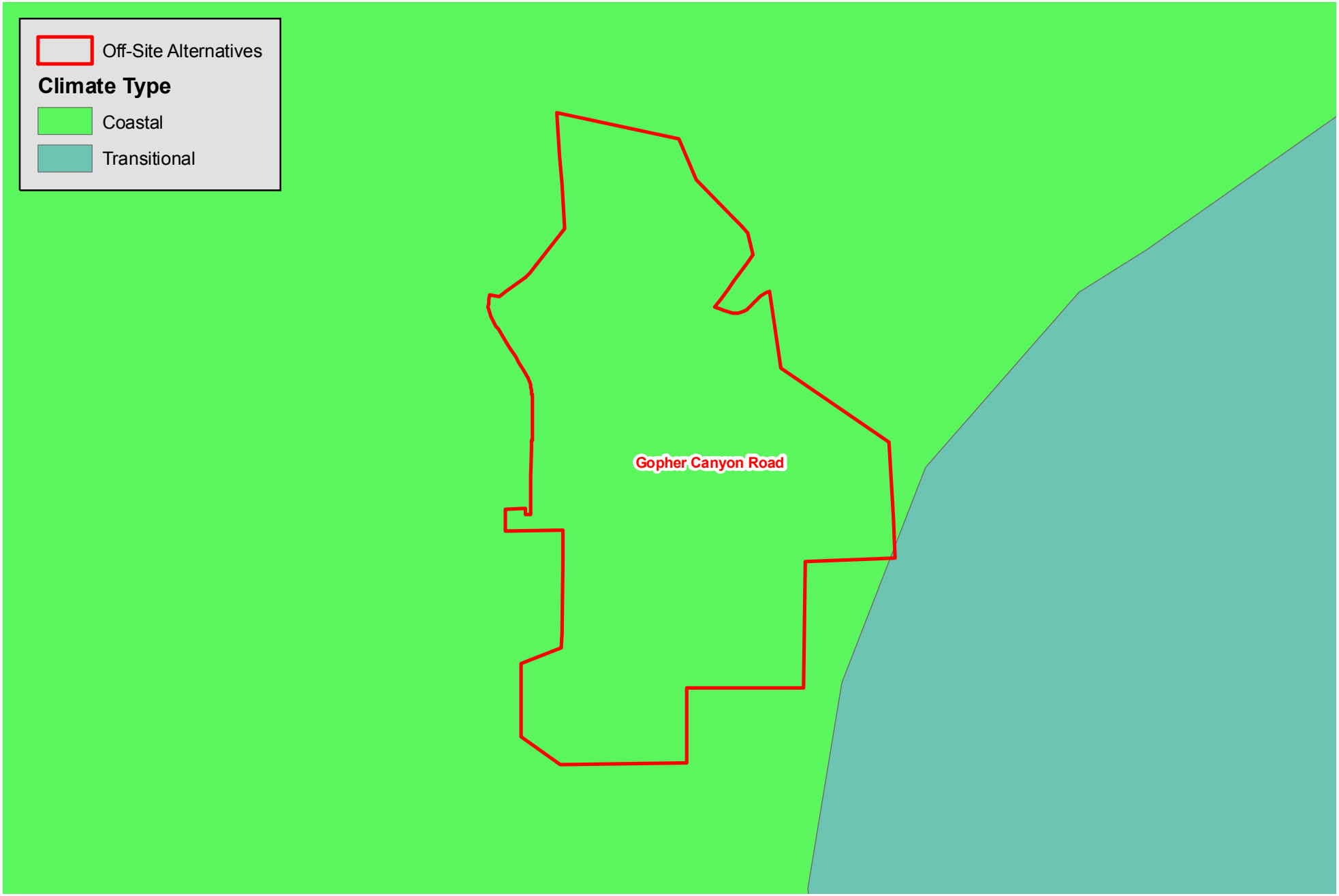
As shown in the FMMP map (Figure 22), the Gopher Canyon Road site is designated as "other," which indicates a non-agricultural use and may indicate natural, undeveloped open space. Two areas, one abutting the left boundary to the west and one abutting the northeast corner of the property are designated as "urban and built-up land," which may not be compatible with agricultural uses.

The San Diego County maps of agricultural commodities for the Gopher Canyon site and surrounding areas indicates no agricultural uses occur within the surrounding lands. See **Figure 23,** *Gopher Canyon Road Area – Agriculture Commodities*. The distance of the Gopher Canyon Road property from active agricultural lands and proximity to "urban and built up land" reduces the attractiveness of the site for agricultural purposes. Therefore, the LARA Model Rating with respect to surrounding land uses is considered to be "low."

Land Use Consistency

As illustrated in **Figure 24,** *Gopher Canyon Road Area - General Plan Update Designated Land Uses,* the Gopher Canyon Road Alternative site contains a variety of designations, including a small section of "public/semi-public facilities" along the west/central edge, continuing from an off-site area to the west. The southwest section of the property is designated as "rural lands," a designation that continues from a broader section of designated "rural lands" to the south and west. The southeast section of the property is designated as "public agency lands," which is a continuation of a broader section of designated "public agency" land to the south and east. The northwest quadrant of the property is designated as "semi-rural residential" (SR-4), which is a continuation of a broader section of designated "semi-rural residential" to the north and west of the property. All "rural" designations allow agricultural uses. The northeast quadrant of the property is designated as "specific plan area" which is a continuation of a broader section of designated "specific plan" land to the north and east of the property.

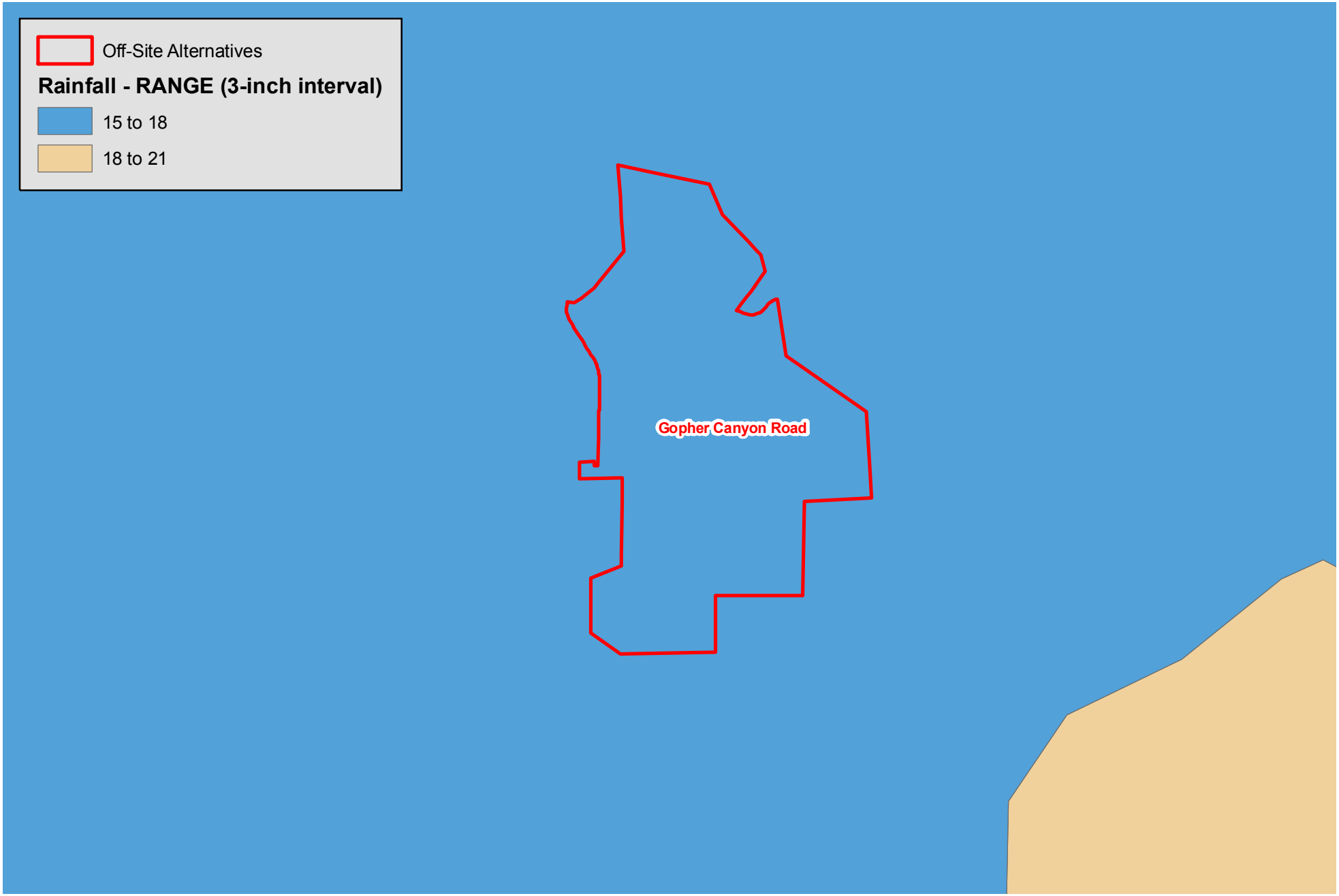
Figure 25, *Gopher Canyon Road Area – Zoning in San Diego County Unincorporated Areas*, shows the central portion of the site as "agriculture." The northeast sector is designated as "specific plan," the southwest corner is designated as "rural residential" and the east edge is designated as "extractive use." **Figure 26**, *Gopher Canyon Agricultural Preserves Contracts,* shows that no Williamson Contracts occur on the property or in the vicinity. The 2002 FMMP map (Figure 22) also indicates that no agricultural lands occur in the area. This indicates that the area has not been historically farmed or would be suitable for agricultural use. Although agricultural uses would be consistent with much of the underlying designation of the property (as shown in Figure 25), because no agricultural activities occur on the site or in the near-surrounding area, the LARA Model Factor Rating with respect to land use would be considered "low."



Gopher Canyon Road Area Climate Zone

FIGURE
19

Gregory Canyon
Source: SANDAG, 2012; PCR Services Corporation, 2012.



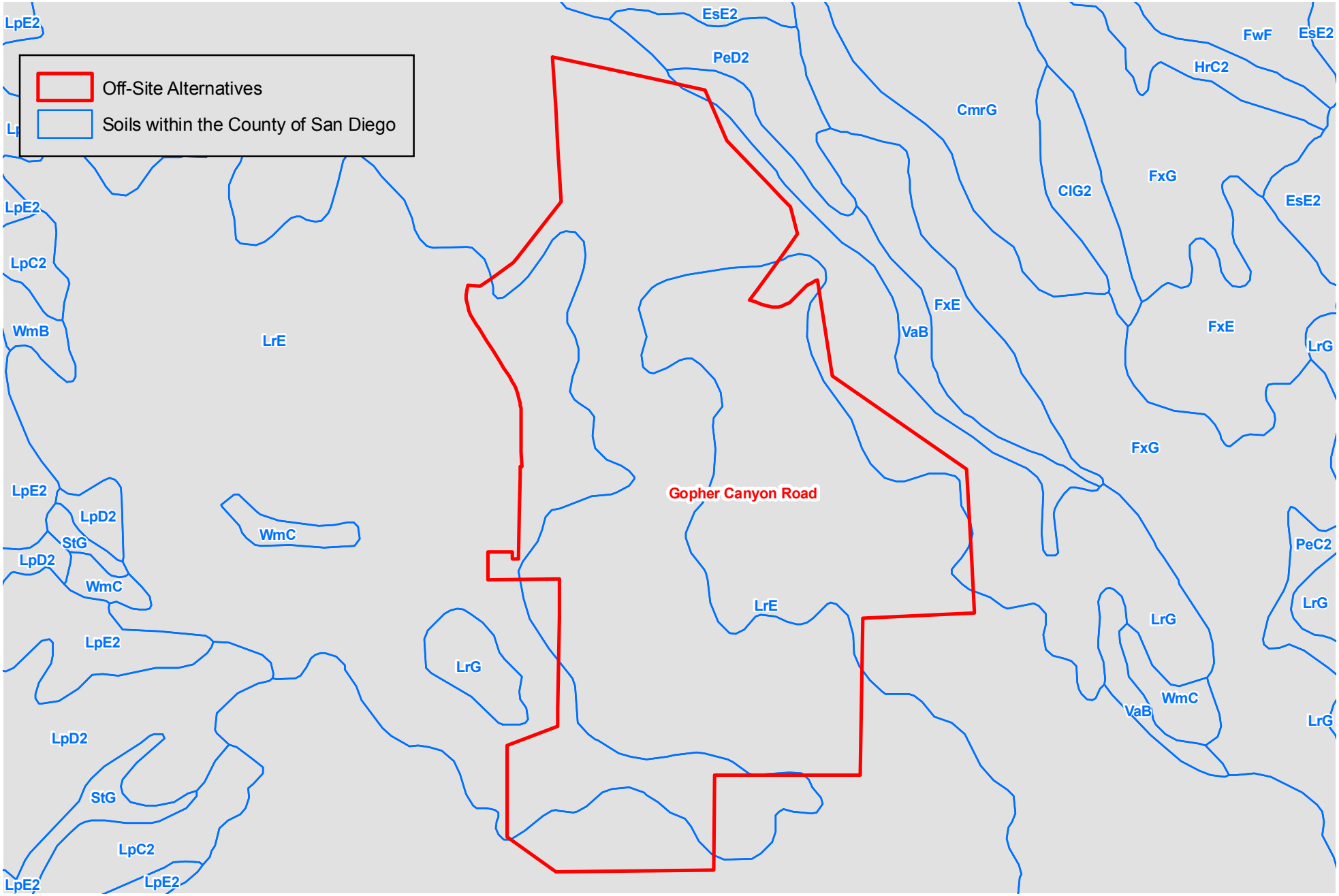
Gopher Canyon Road Area Average Rainfall - 30 Year Average

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

20



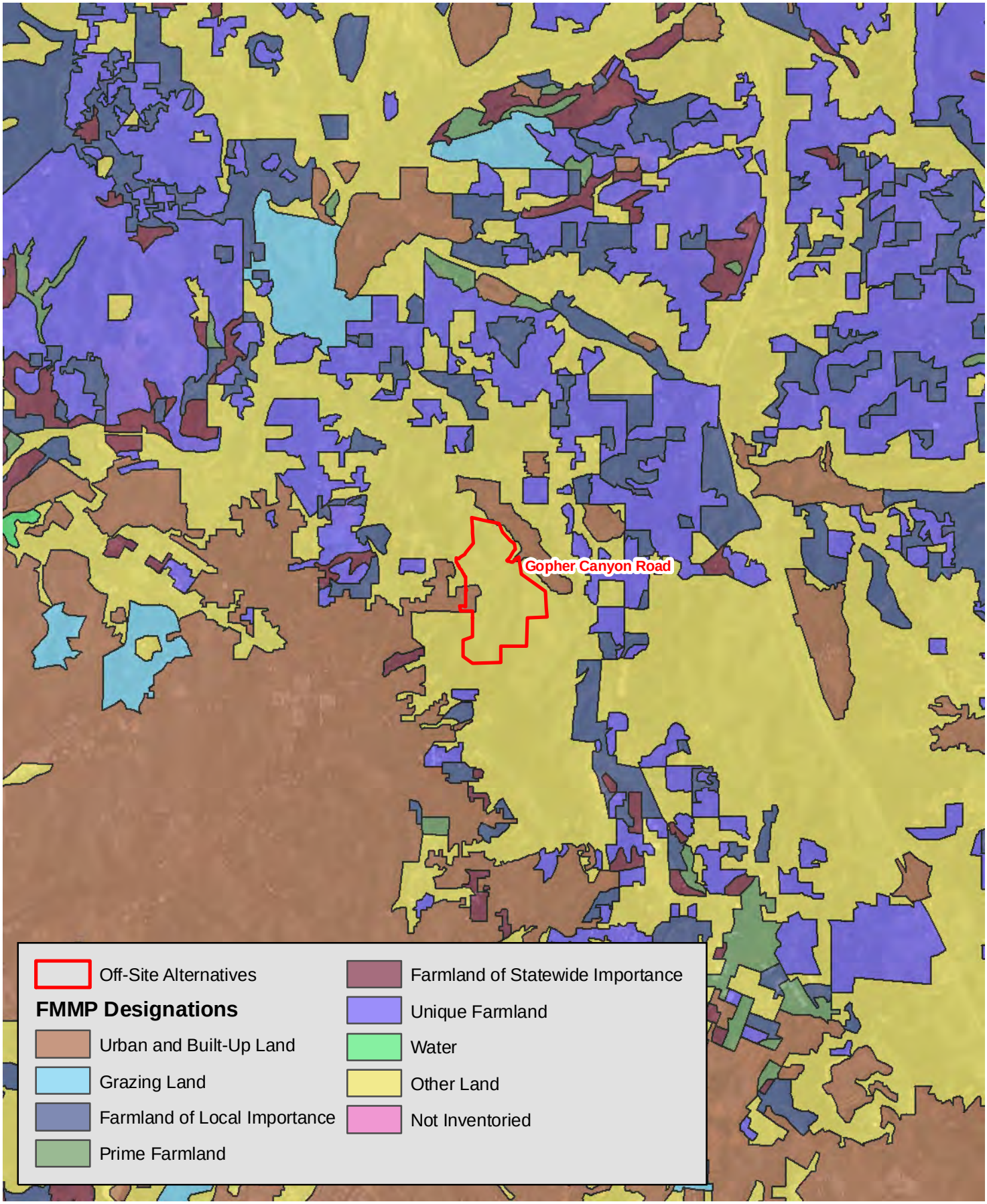
Gopher Canyon Road Area Soils

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

21



PCR

N

0 1.25 2.5 Miles

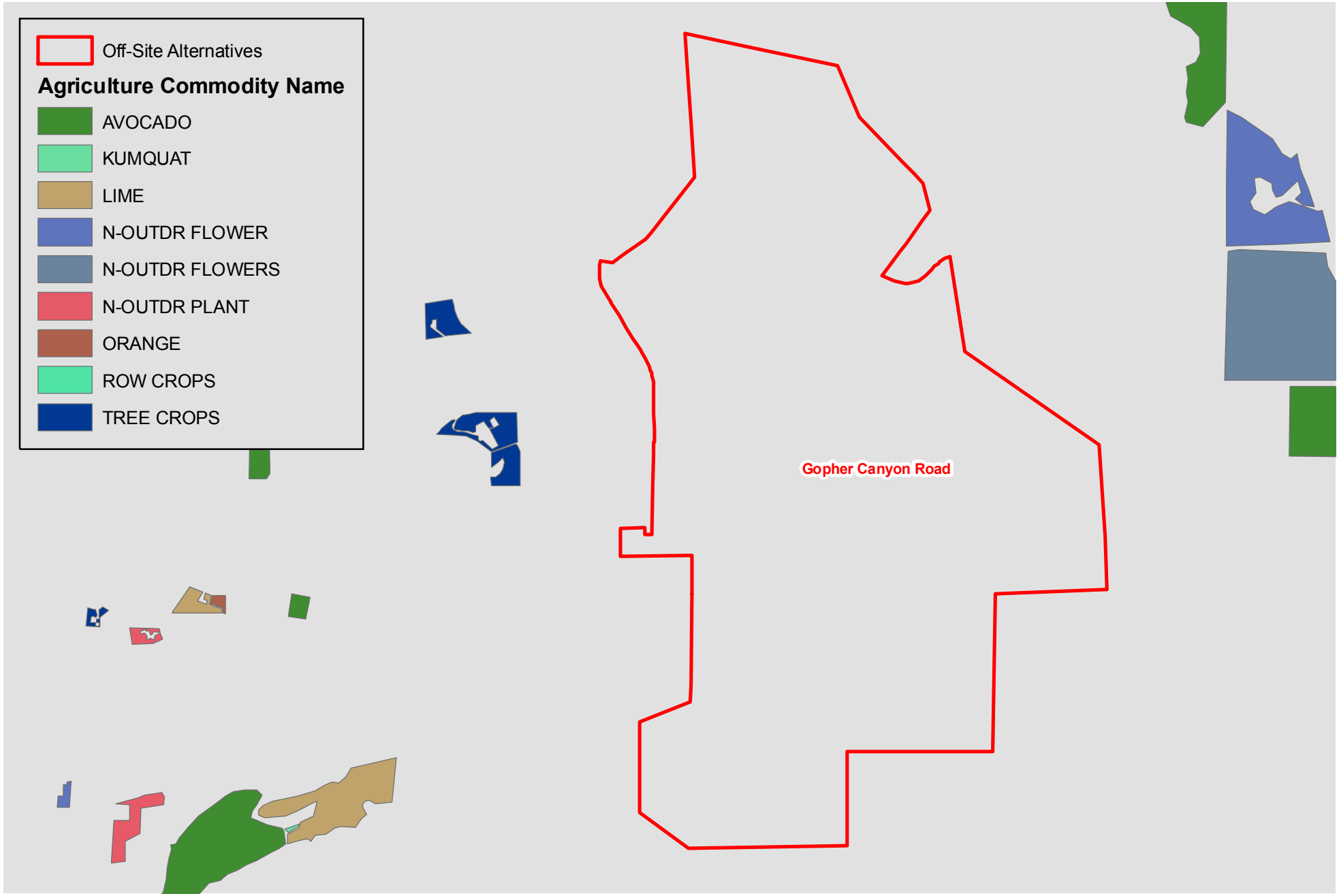
Gopher Canyon Road Area FMMP Map

Gregory Canyon

Source: Aerial Express, 2009; FMMP, 2002; PCR Services Corporation, 2012.

FIGURE

22



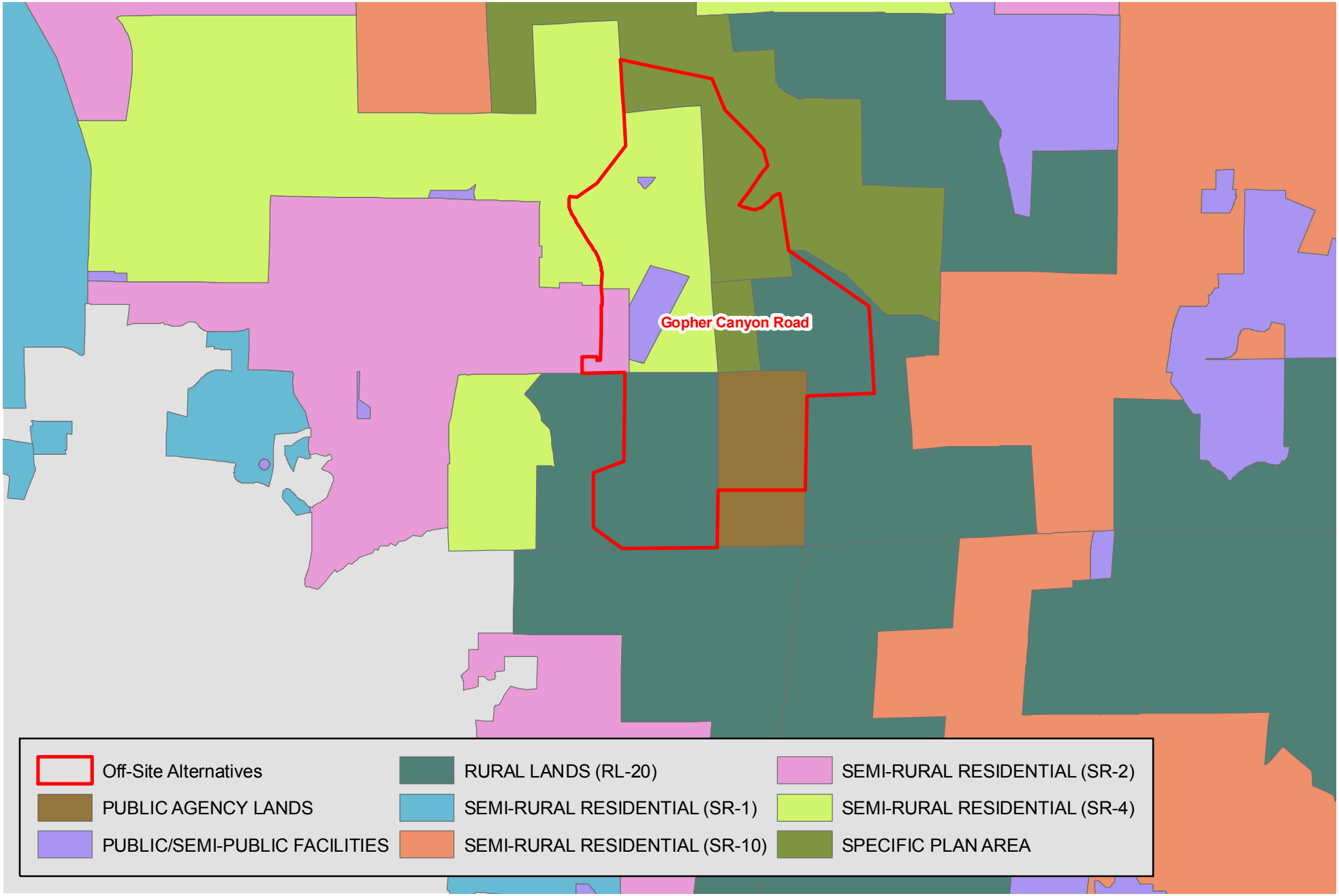
Gopher Canyon Road Area - Agricultural Commodities

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

23



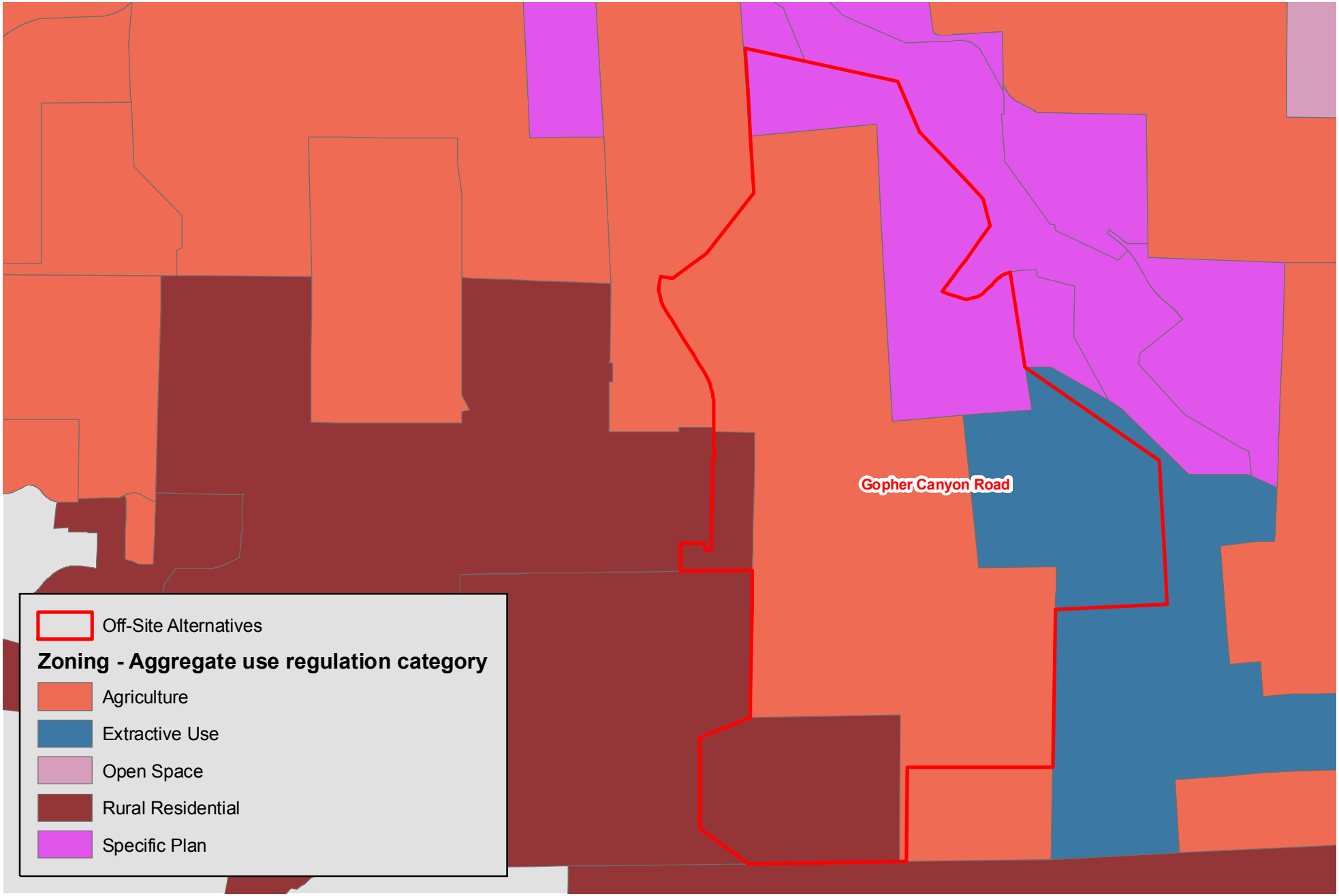
Gopher Canyon Road Area - General Plan Update Designated Land Uses

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

24



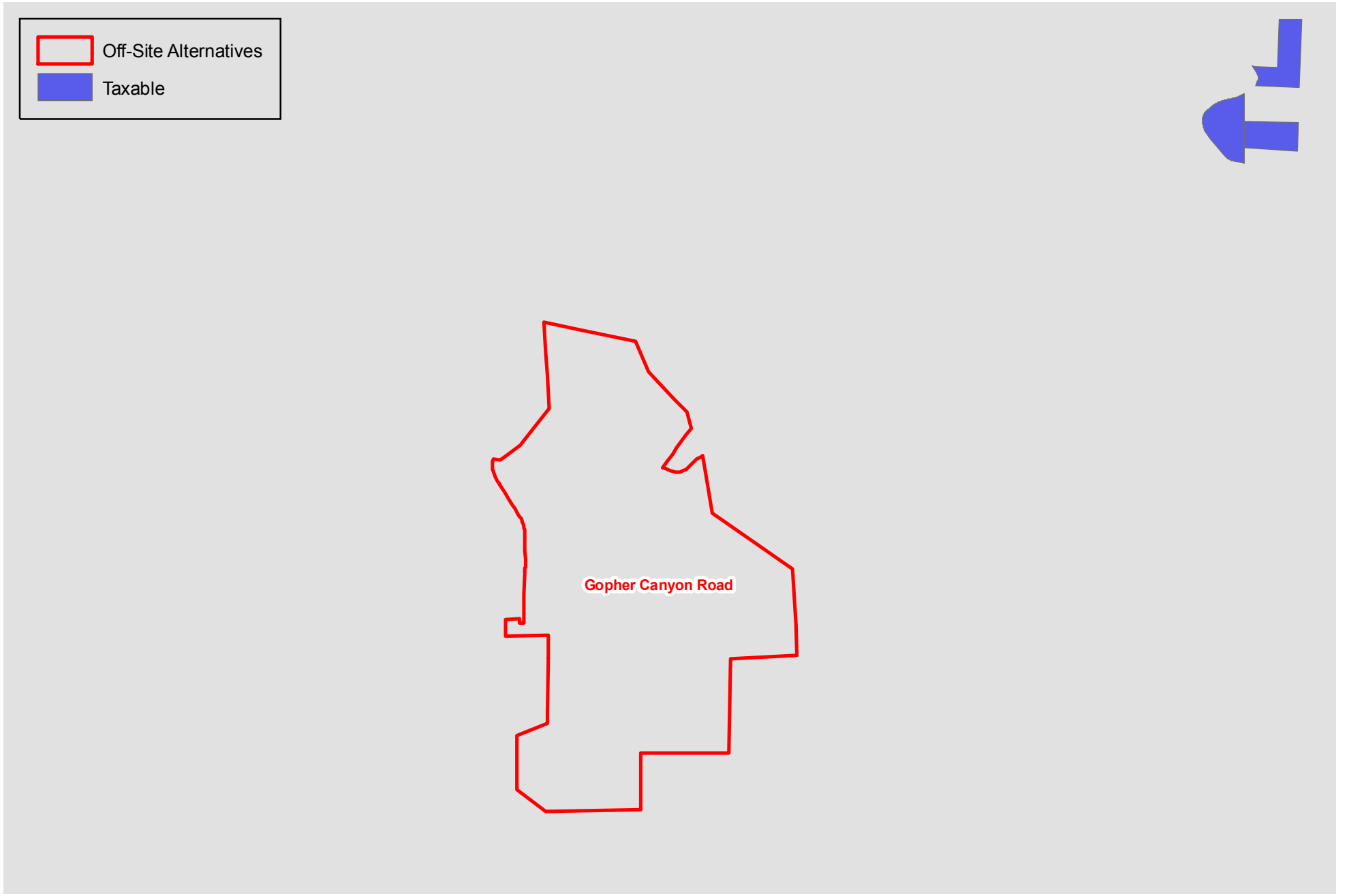
Gopher Canyon Road Area - Zoning for San Diego County Unincorporated Areas

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

25



N

0 2,000 4,000 Feet

Gopher Canyon Road Area - Agricultural Preserves Contracts

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

26

Slope

The land is characterized by varied topography, with both minor and major riparian corridors surrounded by hills and mountains of all scales. Many grove crops such as oranges and avocados can be planted on sloped property in San Diego County. However, because of the predominant slope of the property, the slope rating for the site is considered to be "low."

Summary of LARA Analysis for the Gopher Canyon Road Alternative Site

In order for the site to be considered an important agricultural resource based on the LARA model, all three "required factors" (water, climate and soil) must receive a "high" or "moderate" score. If two "required factors" are rated as "moderate," at least two "complementary" factors (surrounding land uses, land use consistency, and slope) must be rated "high" in order for the property to be considered an important agricultural resource.

Table 7, *LARA Model Factor Ratings for the Gopher Canyon Road Alternative Site*, provides a summary of the rating for each of the required factors, discussed above, for the Gopher Canyon property. As shown in Table 7, under "required factors," the Gopher Canyon Road site would have a "low" rating related to soil quality. In addition, the property would have no high-rated complementary factors to qualify the property as an important agricultural resource. Therefore, the site is determined to not be an important agricultural resource.

Table 7

LARA Model Factor Ratings for the Gopher Canyon Road Alternative Site

	LARA Model Rating		
Required Factors	**High**	**Moderate**	**Low**
Water		X	
Climate	X		
Soil Quality			X
Complementary Factors			
Surrounding Land Uses			X
Land Use Consistency			X
Slope			X

Source: PCR Services Corporation, 2012

D. Merriam Mountain Alternative Site

The Merriam Mountain Alternative site consists of approximately 533 acres, although the footprint of the landfill footprint is expected to be approximately 199 acres. The site consists primarily of natural open space.

Water

The Merriam Mountain Alternative site is located within the service area of the Vallecitos Water District, which provides municipal water to the surrounding region. However, because agricultural uses do not have a high priority with respect to municipal water sources, water availability is considered "moderate."

Climate

The Merriam Mountain Alternative site is located in a section of San Diego County described as "transitional" on the SANDAG-SanGIS Climate Zone map (see **Figure 27,** *Merriam Mountain Area Climate Zone*). The "transitional" zone is considered less temperate than the "coastal" zone, which is more amenable to a broader range crop types. Based on the 30-year average rainfall, the Merriam Mountain property receives an average of approximately 18 -21 inches per year (see **Figure 28**, *Merriam Mountain Average Rainfall - 30 year average*). Because the property's climate zone is less temperate than the coastal zone, the climate factor on the LARA model is rated as "moderate."

On-site Soil Quality

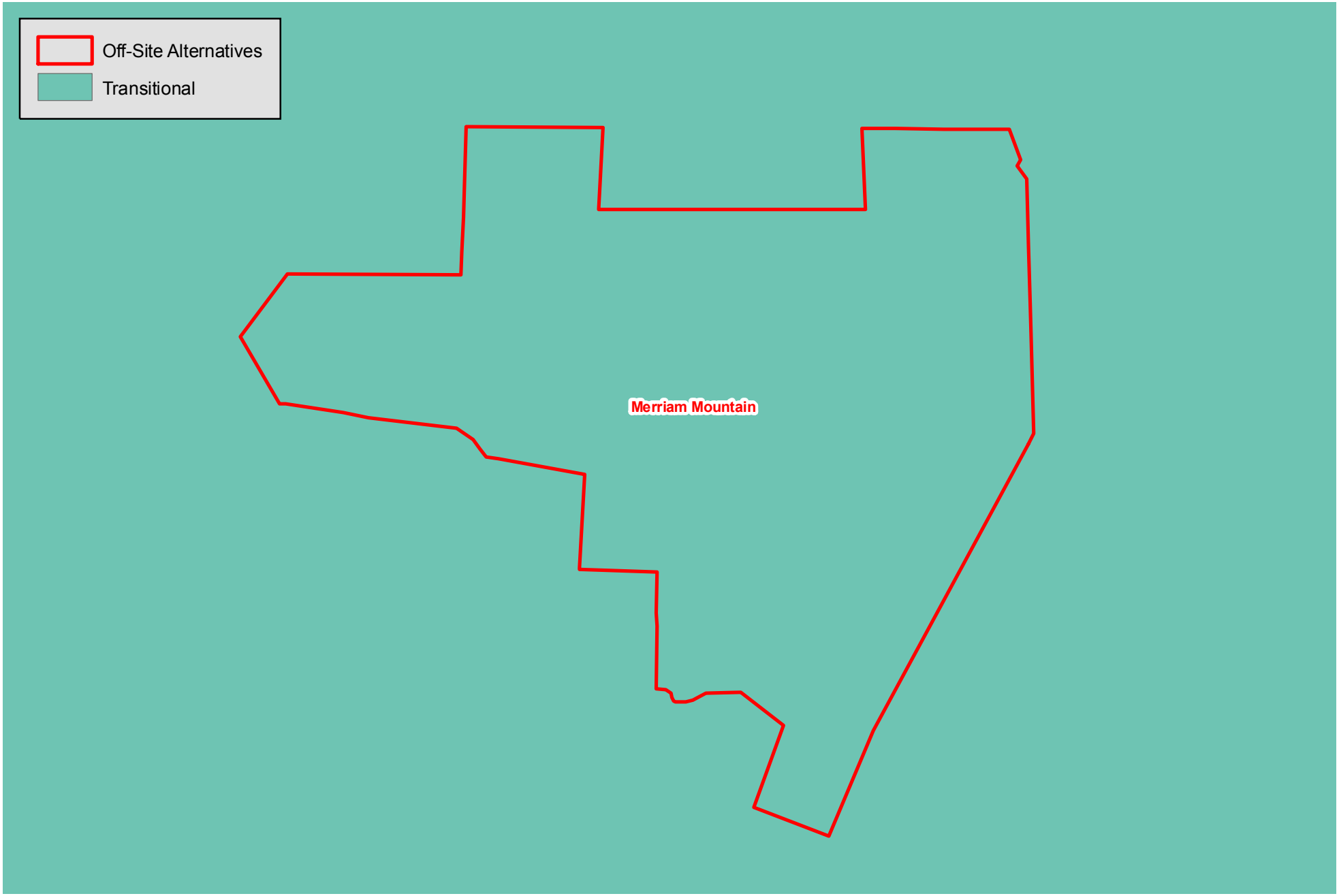
As shown in **Figure 29***, Merriam Mountain Area Soils*, on site soils include AcG (acid igneous) and CmG (Cieneba series), which are very rocky. These soils are not considered suitable for agricultural crops. The FMMP may also be used to identify agricultural resources and areas with high quality soils. As shown in **Figure 30,** *Merriam Mountain Area FMMP Map*, the property contains no FMMP designated areas. Because onsite soils are not typically suitable for agricultural purposes, soils are rated "low" on the LARA model factor scale.

Surrounding Land Uses

Because of the site's location in the middle of the Merriam Mountain range, a significant amount of land surrounding the site is vacant/undeveloped. According to San Diego Association of Governments (SANDAG) data from 2009, existing land uses that abut the mountain range include rural residential, extractive, communications/utilities, freeway, mobile home park, golf course, resort, and orchard/vineyard.

As shown in the FMMP map (Figure 30), the Merriam Mountain property is designated as "other," which indicates a non-agricultural use and may indicate natural, undeveloped open space. All surrounding, adjoining lands are also designated as "other." The FMMP map indicates a non-contiguous area of farmland to the southwest and a non-contiguous area of "urban built up land" to the northeast of the property.

The San Diego County maps of agricultural commodities for the Merriam Mountain Alternative site and surrounding areas indicates no agricultural uses occur within surrounding lands. However, an area of avocado farming occurs one-half mile to the southwest of the property (see **Figure 31,** *Merriam Mountain Area – Agriculture Commodities*). Because agricultural uses are thinly distributed in the region and are not located adjacent to or near the Merriam Mountain Alternative site, the LARA Model Rating with respect to surrounding land uses is considered to be "low."



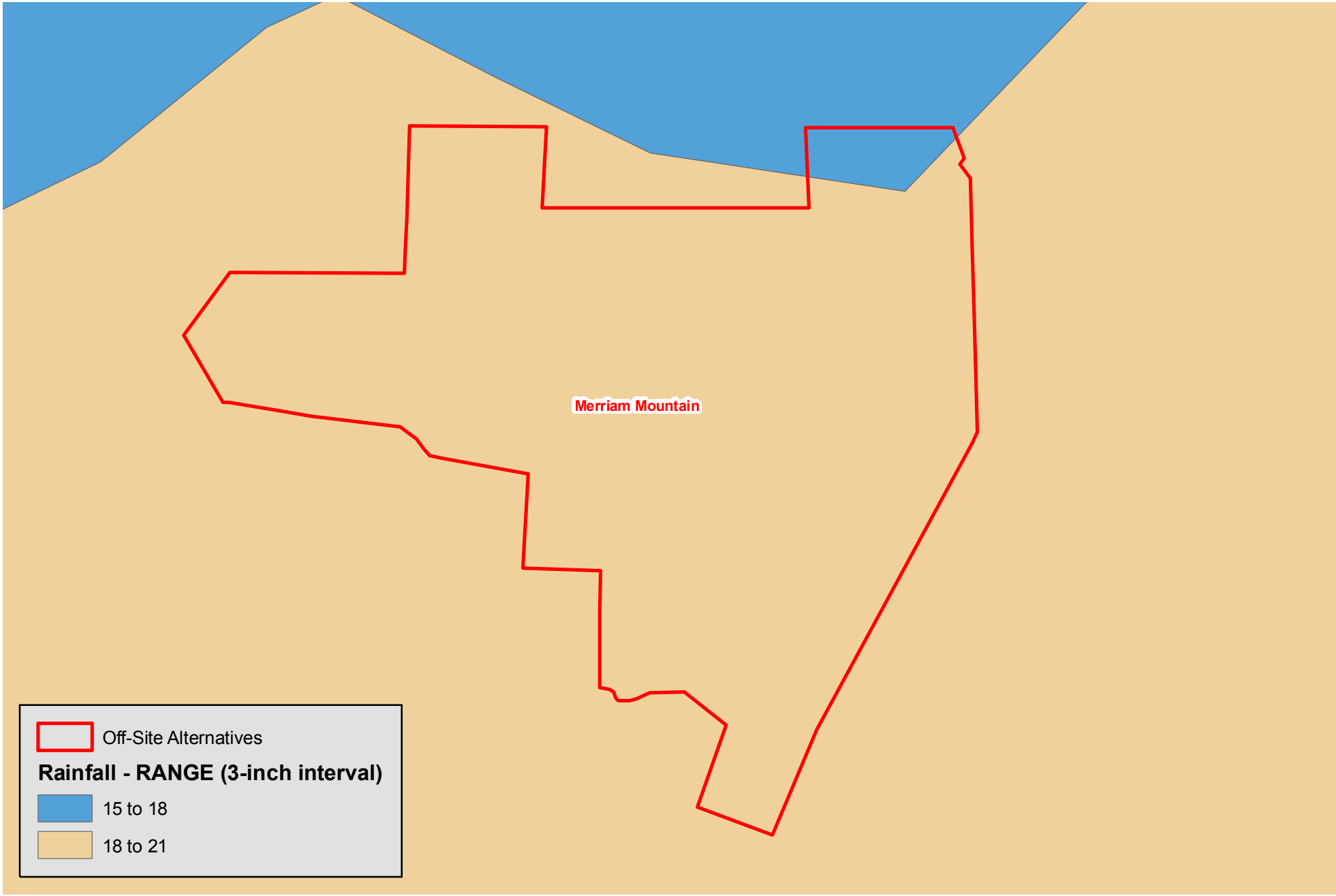
Merriam Mountain Area Climate Zone

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

27



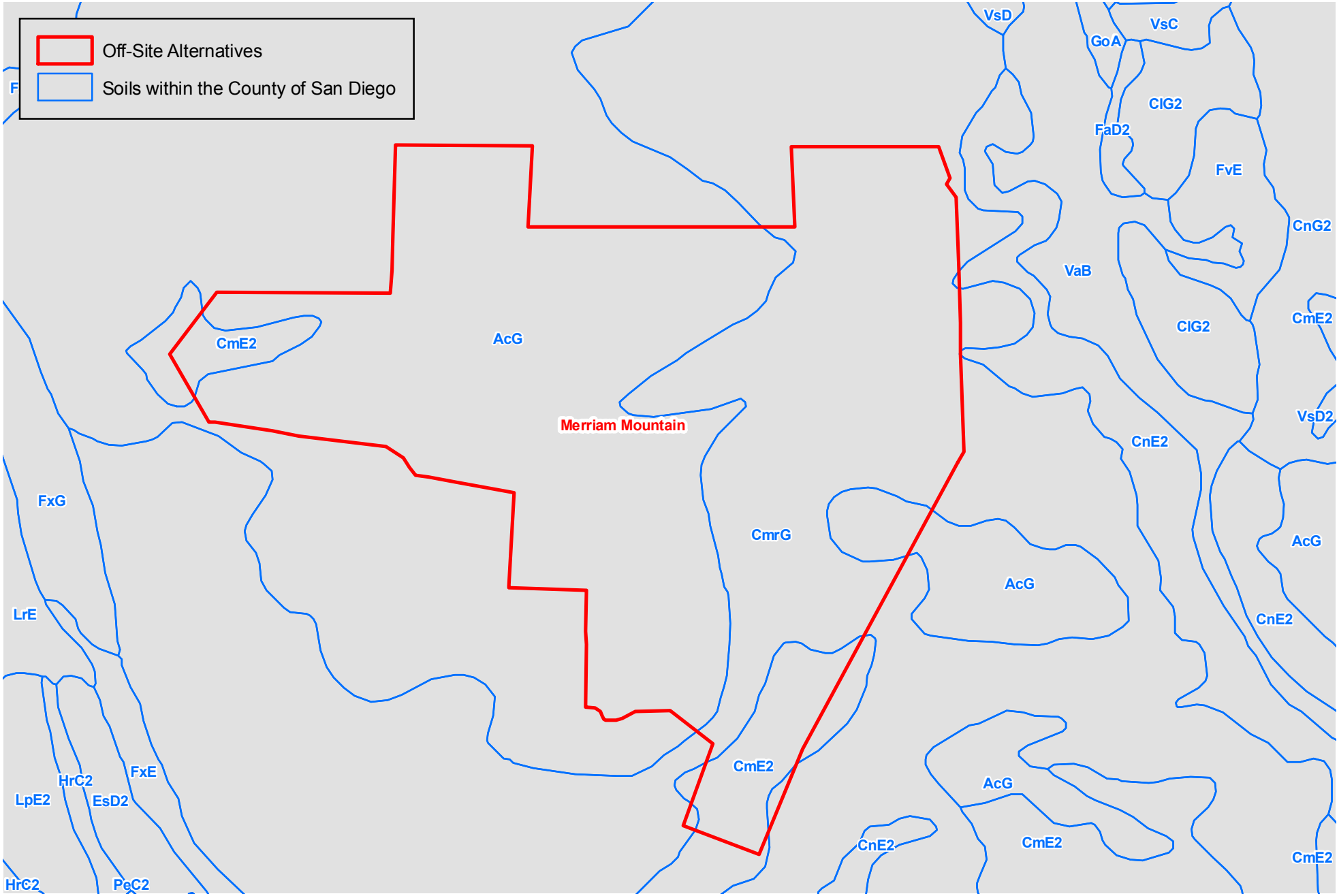
Merriam Mountain Area Average Rainfall - 30 Year Average

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

28

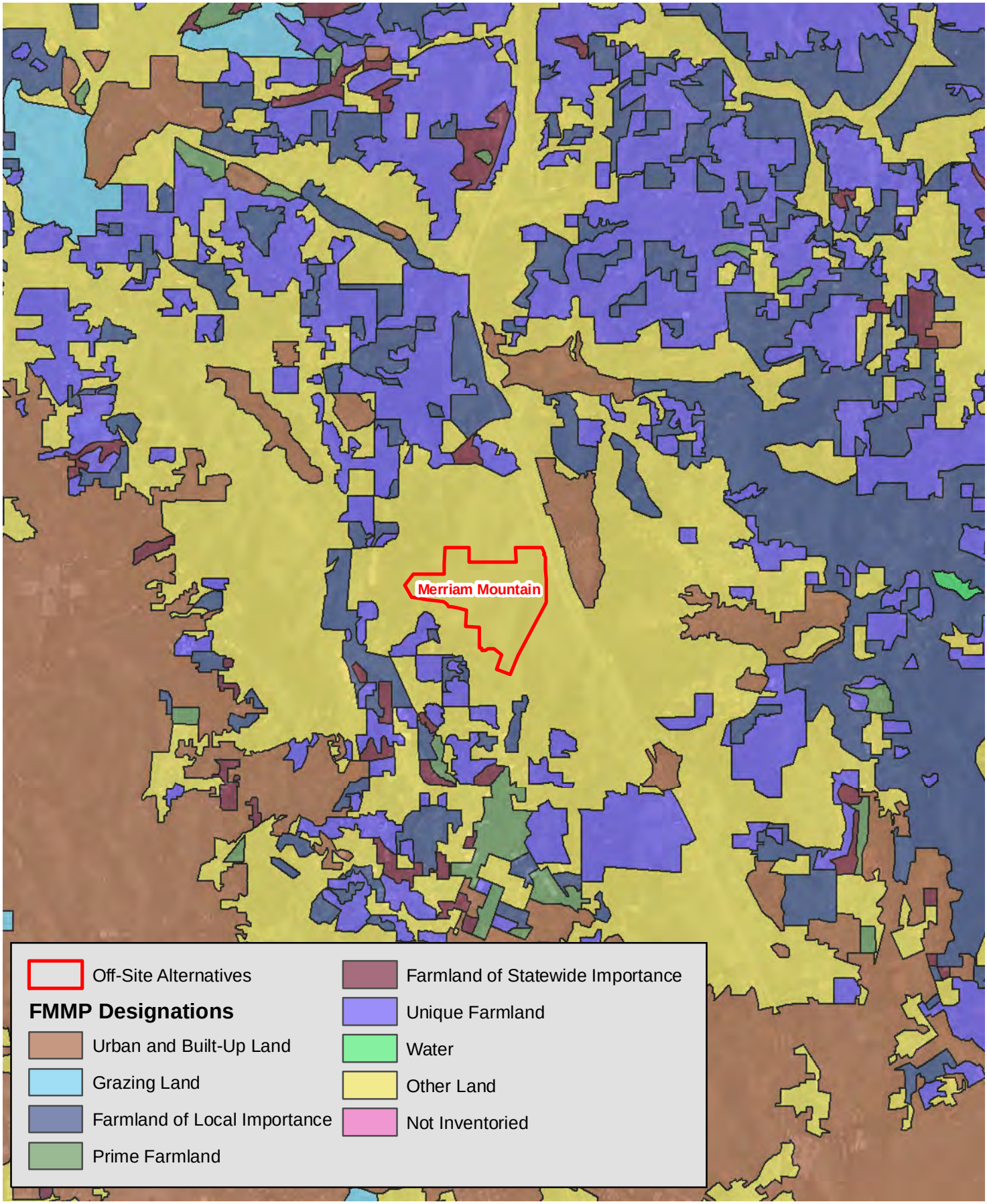


Merriam Mountain Area Soils

FIGURE
29

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.



PCR

N

0 1.25 2.5 Miles

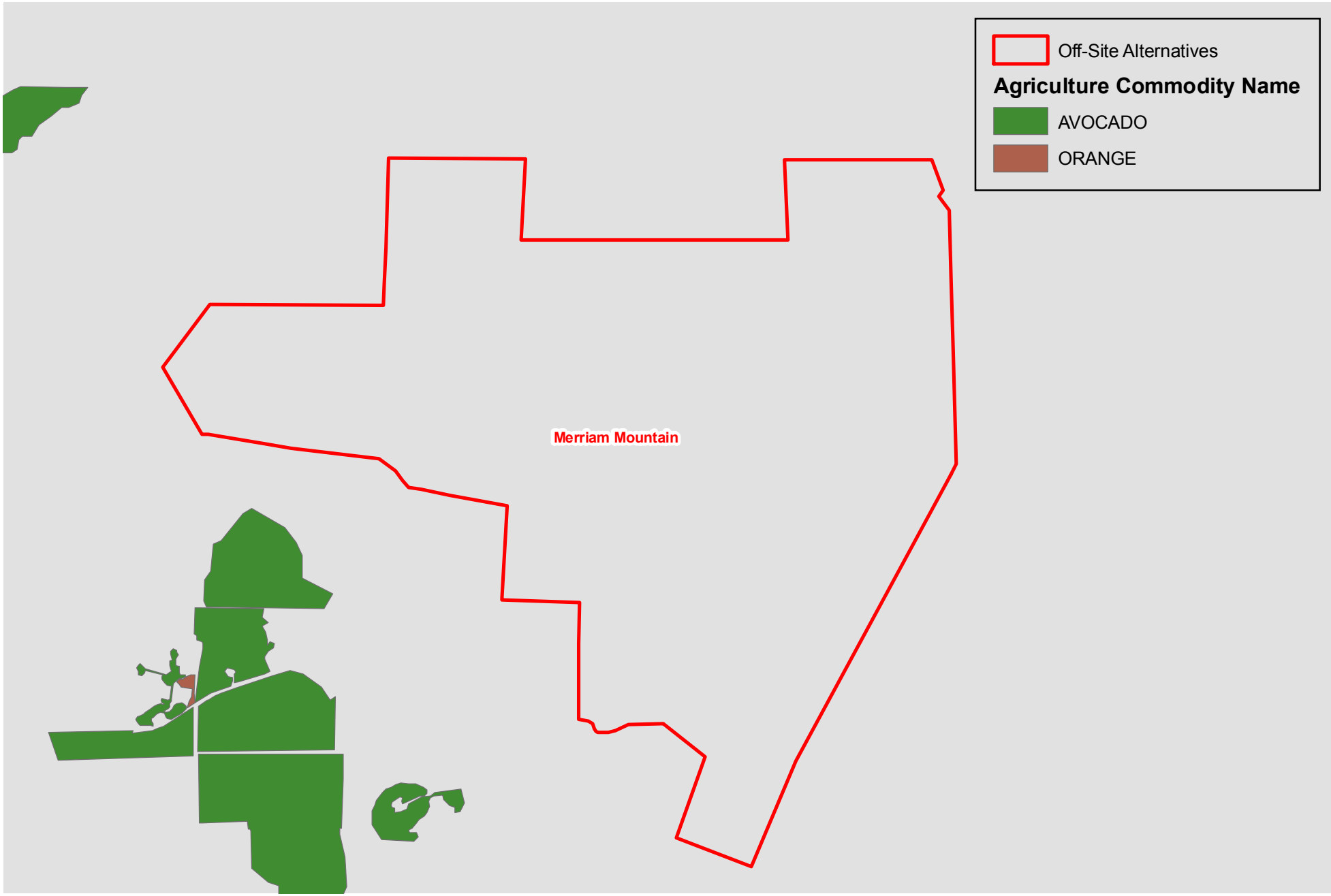
Merriam Mountain Area FMMP Map

Gregory Canyon

Source: Aerial Express, 2009; FMMP, 2002; PCR Services Corporation, 2012.

FIGURE

30



Merriam Mountain Area - Agricultural Commodities

FIGURE
31

Gregory Canyon
Source: SANDAG, 2012; PCR Services Corporation, 2012.

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Land Use Consistency

The Merriam Mountain Alternative site is currently vacant/undeveloped land. As illustrated in **Figure 32,** *Merriam Mountain Area - General Plan Update Designated Land Uses*, the Merriam Mountain property site is designated as "rural lands" (RL-20). **Figure 33**, *Merriam Mountain Area - Zoning in San Diego County Unincorporated Areas*, the site is designated as "General Rural." All ""rural" designations allow agricultural uses, even in areas in which agricultural uses have not occurred. **Figure 34**, *Merriam Mountain Area - Agricultural Preserves Contracts,* shows that no Williamson Act Contracts occur on the property or in the vicinity. This indicates that the area has not been historically farmed or may not be suitable for agricultural use. Although agricultural uses would be consistent with much of the underlying designation of the property, because no agricultural activities occur on the site or in the near-surrounding area, the LARA Model Factor Rating with respect to land use would be considered "low."

Slope

The land is characterized by varied topography, with both minor and major riparian corridors surrounded by hills and mountains of all scales. Although slopes may be suitable for avocado farming, because of the steepness and predominant slope of the property, the slope rating for the site is considered to be "moderate."

Summary of LARA Analysis for the Merriam Mountain Property

In order for the site to be considered an important agricultural resource based on the LARA model, all three "required factors" (water, climate and soil) must receive a "high" or "moderate" score. If two "required factors" are rated as "moderate," at least two "complementary" factors (surrounding land uses, land use consistency, and slope) must be rated "high" in order for the property to be considered an important agricultural resource.

Table 8, *LARA Model Factor Ratings for the Merriam Mountain Alternative Site*, provides a summary of the rating for each of the required factors, discussed above, for the Merriam Mountain property. As shown in Table 8, under "required factors," the Merriam Mountain Alternative site would have a "low" rating related to soil quality. In addition, the property would have no high-rated complementary factors to qualify the property as an important agricultural resource. Therefore, the Merriam Mountain Alternative site is determined to not be an important agricultural resource.

Table 8

LARA Model Factor Ratings for the Merriam Mountain Alternative Site

	LARA Model Rating		
Required Factors	**High**	**Moderate**	**Low**
Water		X	
Climate		X	
Soil Quality			X
Complementary Factors			
Surrounding Land Uses			X
Land Use Consistency			X
Slope		X	

Source: PCR Services Corporation, 2012

E. East Otay Mesa Alternative

The East Otay Mesa Alternative site consists of approximately 450 acres, although the footprint of the landfill is expected to be approximately 146 acres. The site consists primarily of natural open space; however, some areas have been (or are being) used for grazing and other agricultural uses.

Water

The East Otay Mesa property is located within the service area of the Otay Water District (OWD), which provides municipal water services to the area. Because the quality and quantity of groundwater can be variable, water availability other than piped sources, is considered "moderate."

Climate

Figure 35, *East Otay Mesa Area Climate Zones*, illustrates the climate zones for the East Otay Mesa Alternative site and the surrounding area. As shown in Figure 35, the East Otay Mesa Alternative site is located in a section of San Diego County described as both "coastal" and "transitional" on the SANDAG-SanGIS Climate Zone map. The "transitional" zone is considered less temperate than the "coastal" zone, which is more amenable to a broader range of crop types. Based on the 30-year average rainfall, the west section of the East Otay Mesa property receives an average of approximately 12 -15 inches per year and the east section receives an average of approximately 15 to 18 inches per year (see **Figure 36**, *East Otay Mesa Area Average Rainfall - 30 Year Average*). Because the majority of the site is located within the coastal zone, the climate factor on the LARA model is rated as "high."

On-site Soil Quality

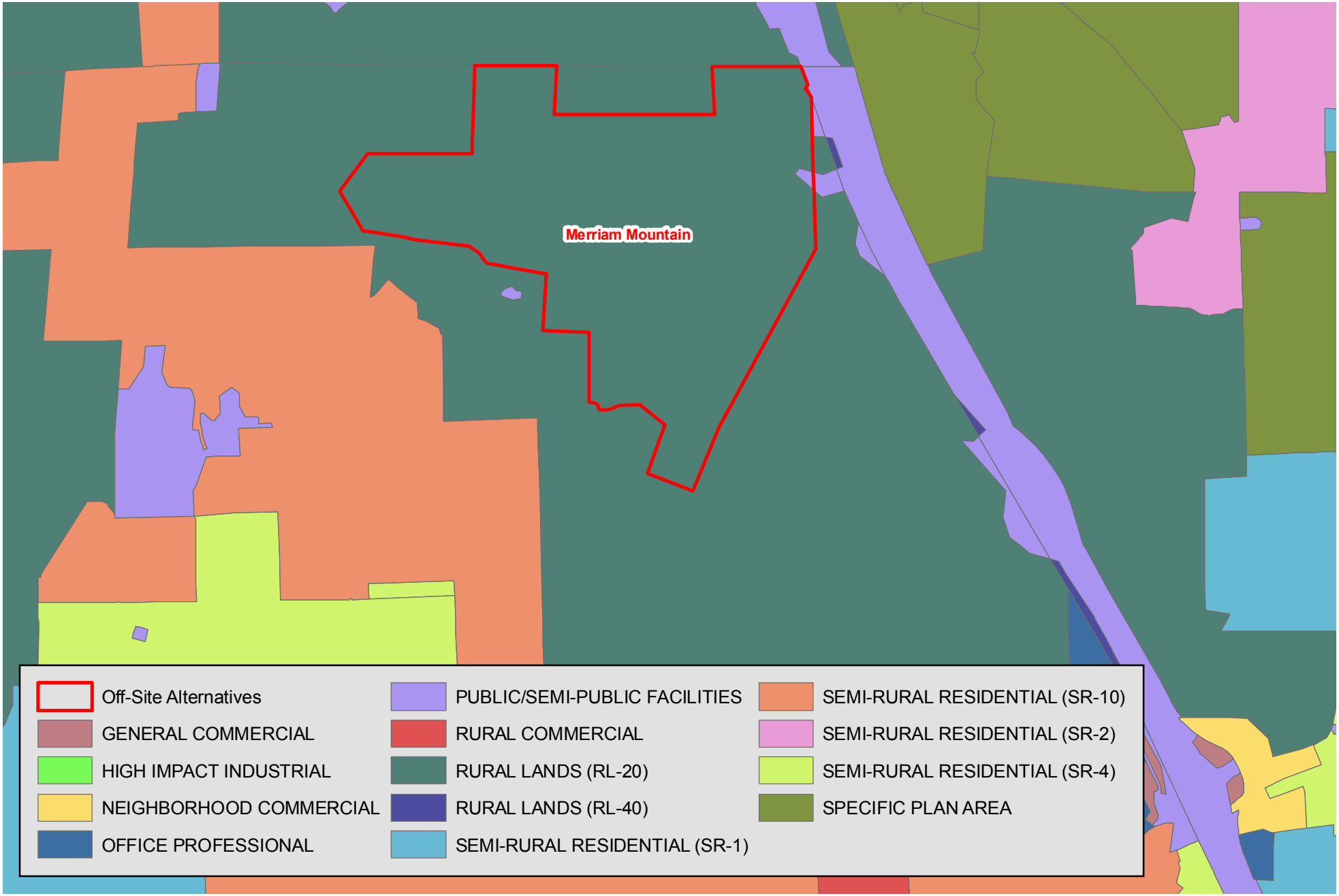
Figure 37, *East Otay Mesa Area FMMP Map*, illustrates the designations applied to the site under the FMMP. As shown in Figure 37, an area located in the southwest quadrant of the landfill footprint (approximately 20 percent of the landfill footprint) is located in an area mapped as Farmland of Local Importance and the remainder of the site is mapped as "Grazing Land." **Figure 38** - *East Otay Mesa Area Soils*, illustrates the soils contained on the site. As shown in Figure 38, soils in southwest quadrant of the landfill footprint include HrC, HrC2, and HrD2 (Huerhuero series) clay-based loam soils. The remainder of the property is characterized by SnG soils (San Miguel-Exchequer), which are rocky silt loams. The Huerhuero soils, which are characterized by 2 to 9 percent slopes, are considered suitable for a several types of field crops, including truck crops, tomatoes, and flowers.[5] These soils also meet the classification category of Soils of Statewide Importance.[6] Because of the substantial presence of Farmland of Local Importance and Huerhuero series soils, soils are rated "high" on the LARA model factor scale.

Surrounding Land Uses

The area surrounding the East Otay Mesa Alternative site is characterized by vacant rural lands to the north and east, and the East Otay Mesa Business Park Specific Plan to the west. Designated land uses in the surrounding area are illustrated in **Figure 39**, *East Otay Mesa – General Plan Update Designated Land Uses*.

[5] *USDA, Soil Conservation Service and Forest Service, Soil Survey, San Diego Area, California, Part II (1973)*

[6] *USDA, Natural Resources Conservation Service, Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, San Diego County (1973, updated 2010).*



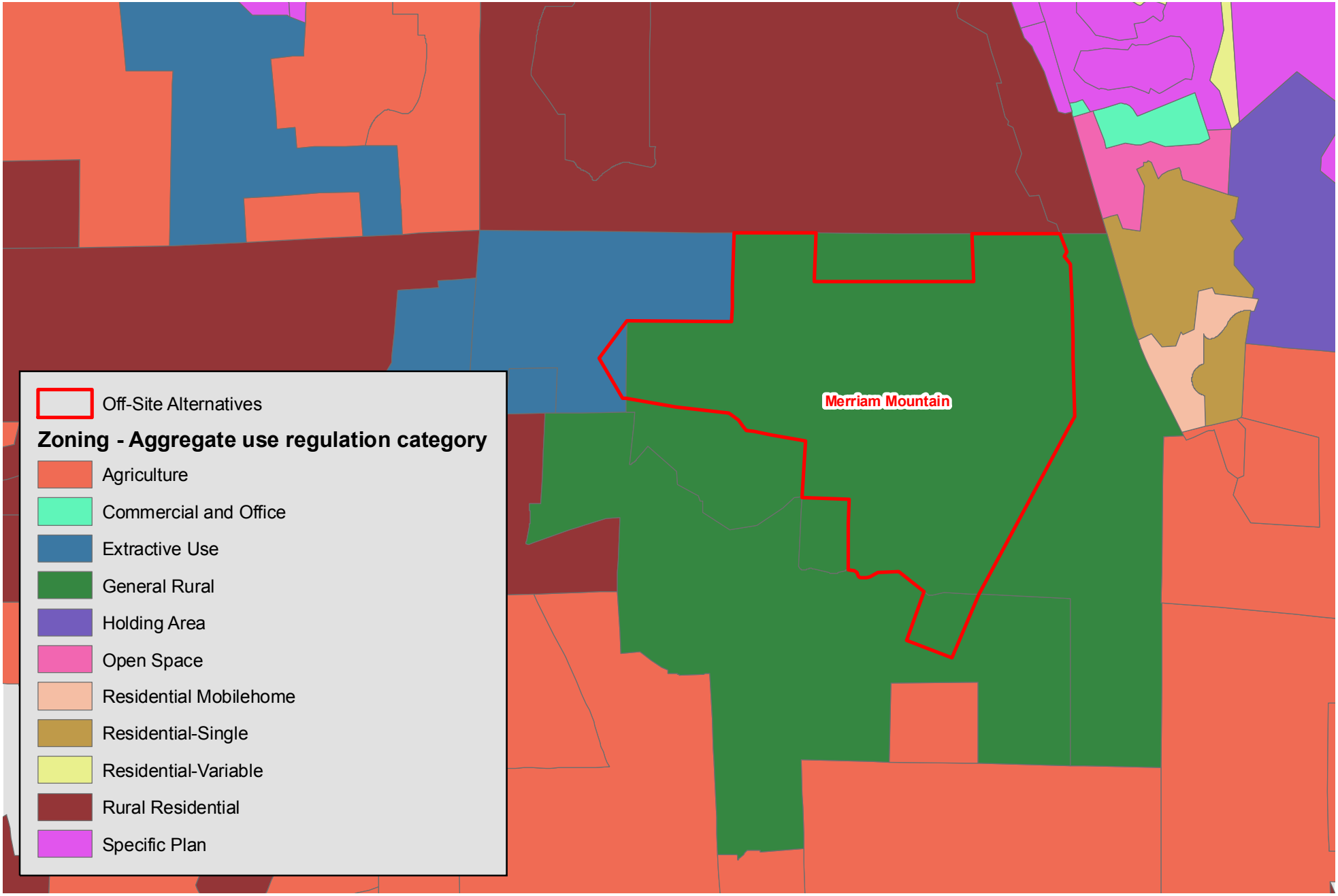
Merriam Mountain Area - General Plan Update Designated Land Uses

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

32



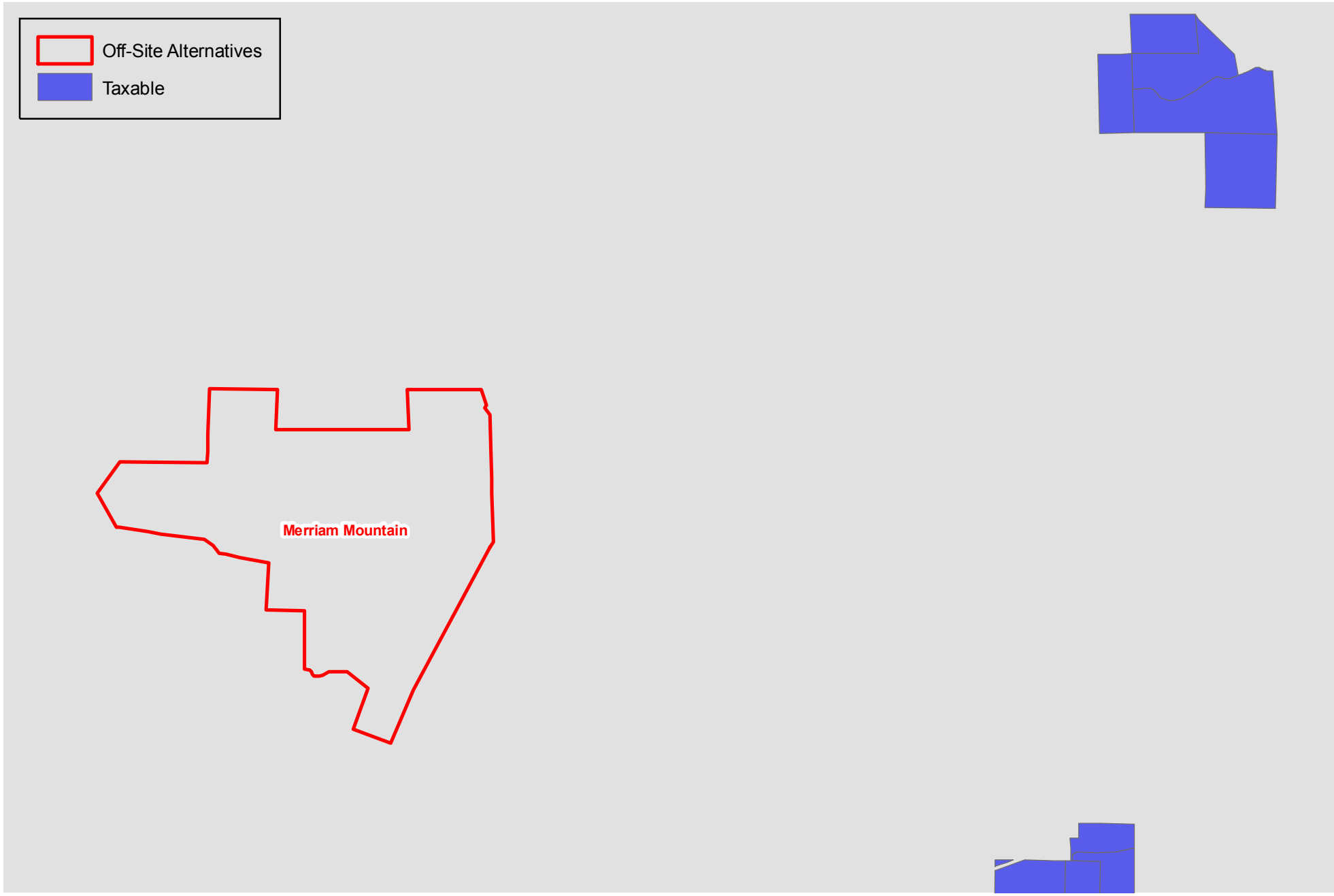
Merriam Mountain Area - Zoning for San Diego County Unincorporated Areas

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

33



N

0 2,000 4,000 Feet

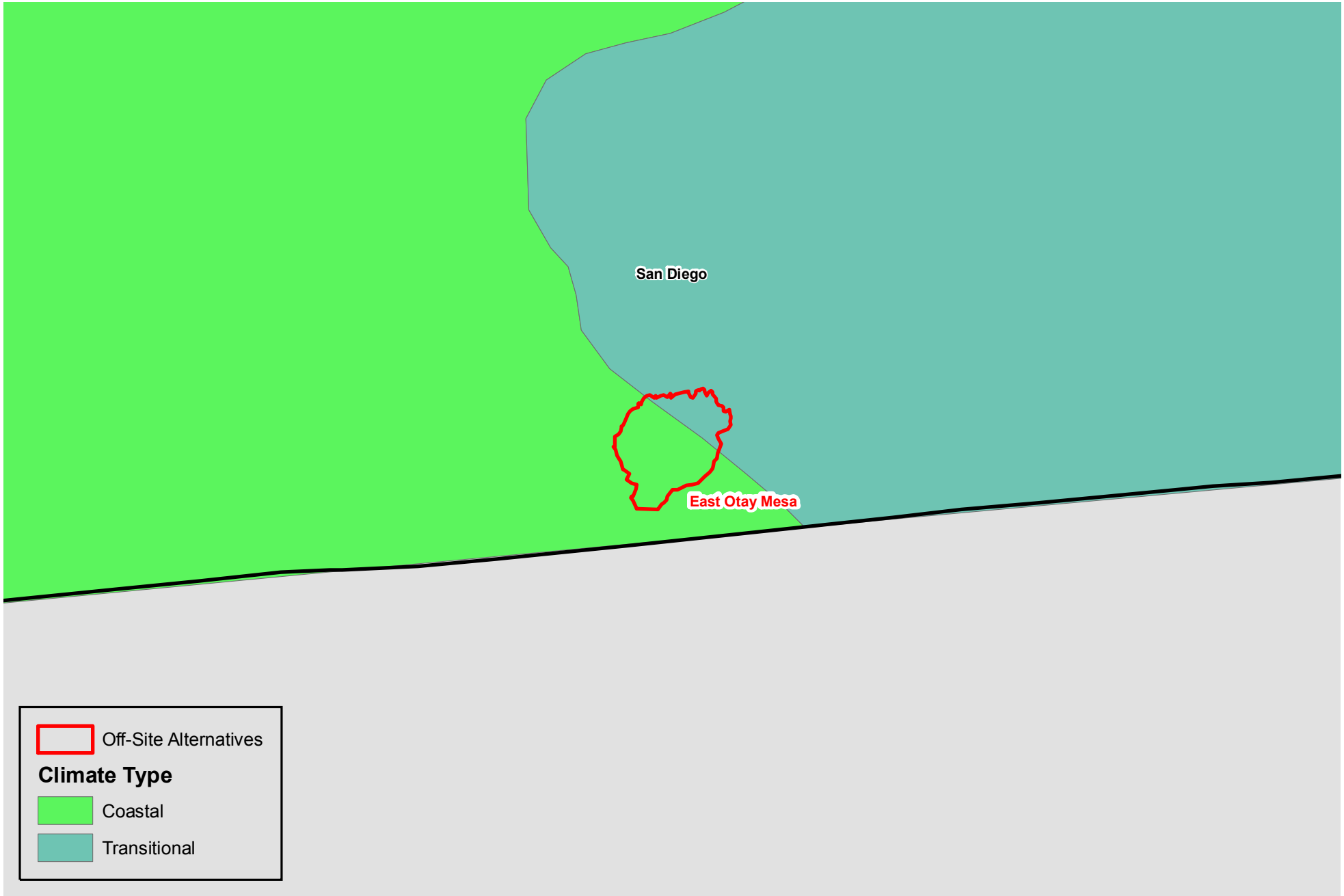
Merriam Mountain Area - Agricultural Preserves Contracts

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

34



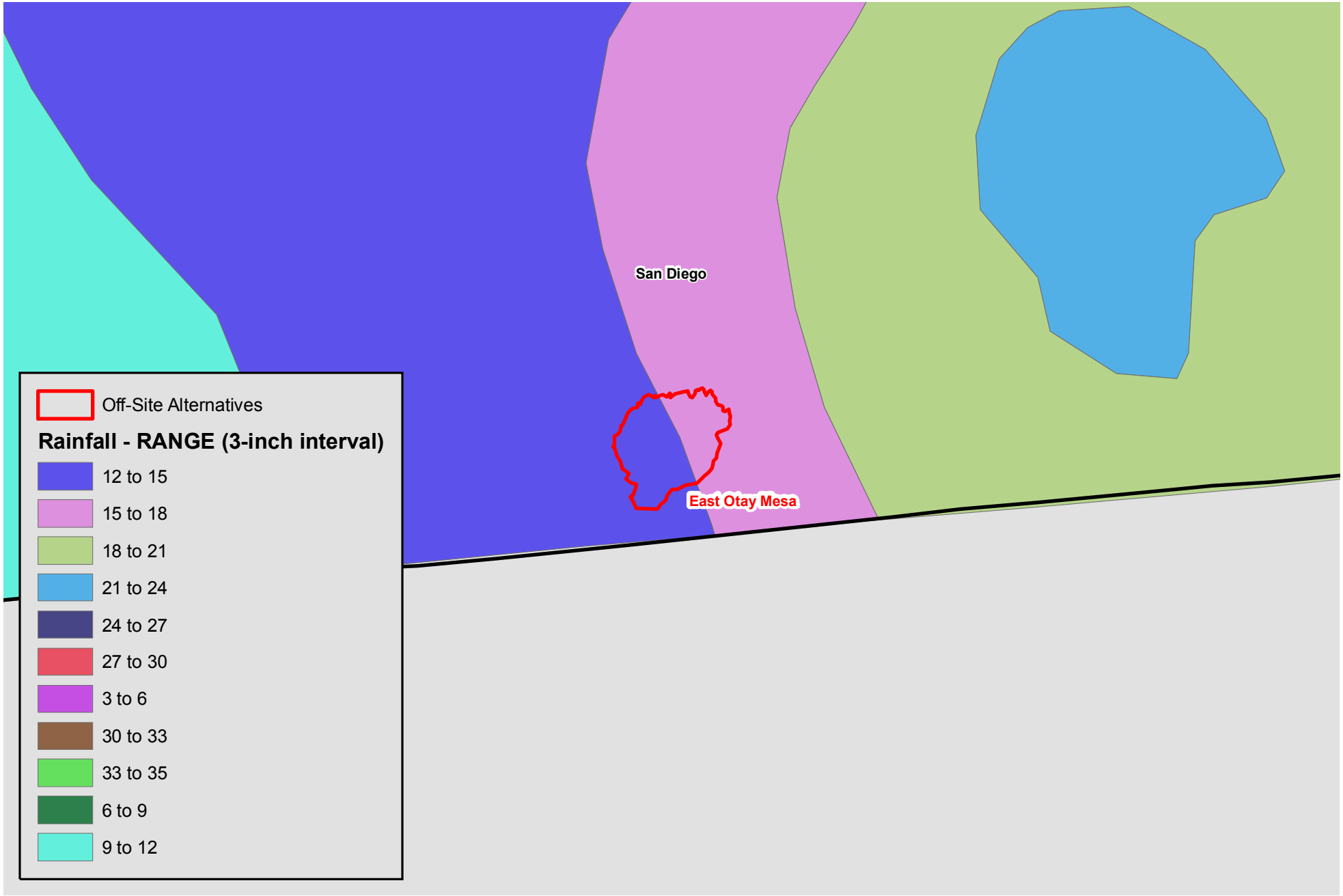
East Otay Mesa Area Climate Zone

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

35



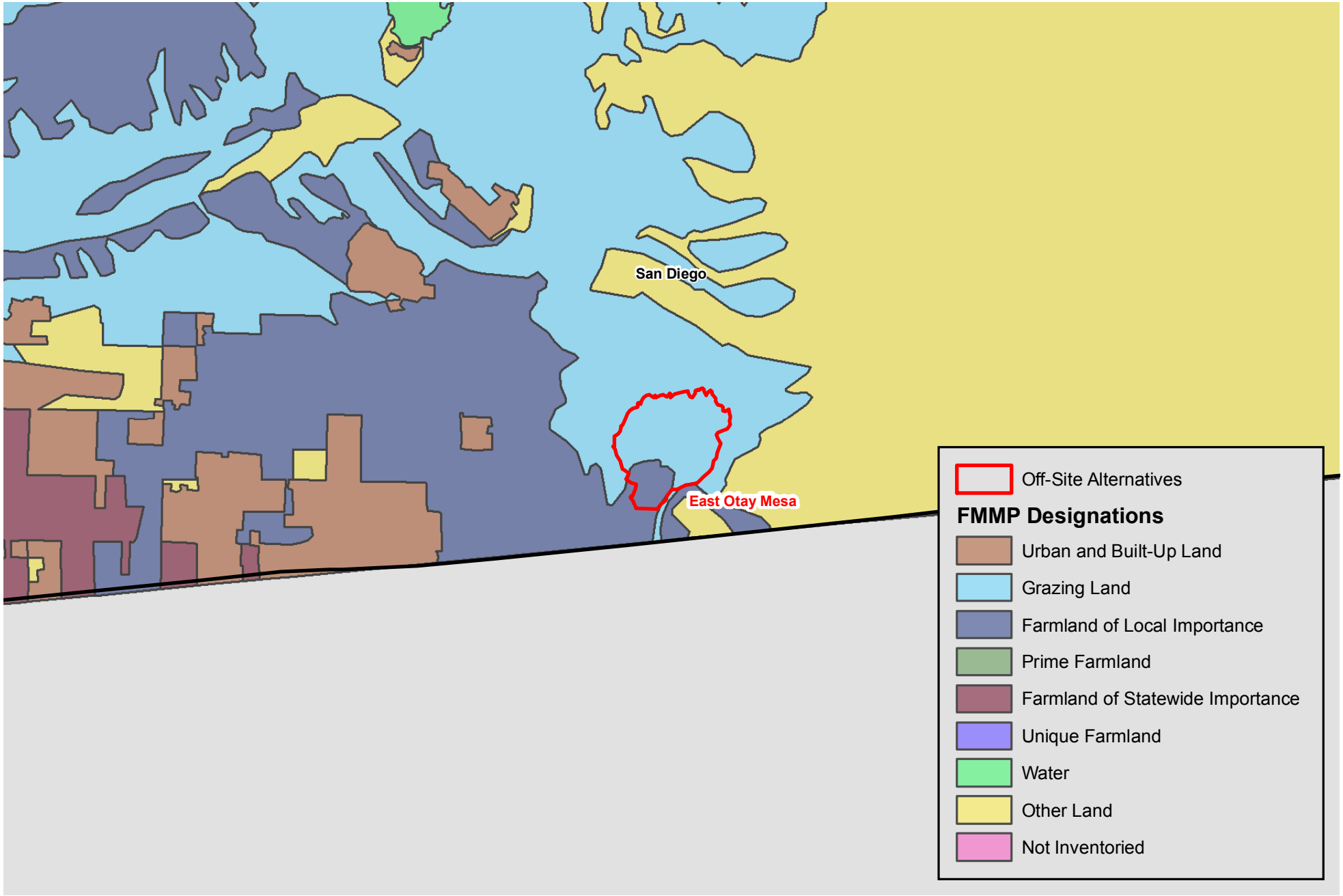
East Otay Mesa Area Average Rainfall - 30 Year Average

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

36



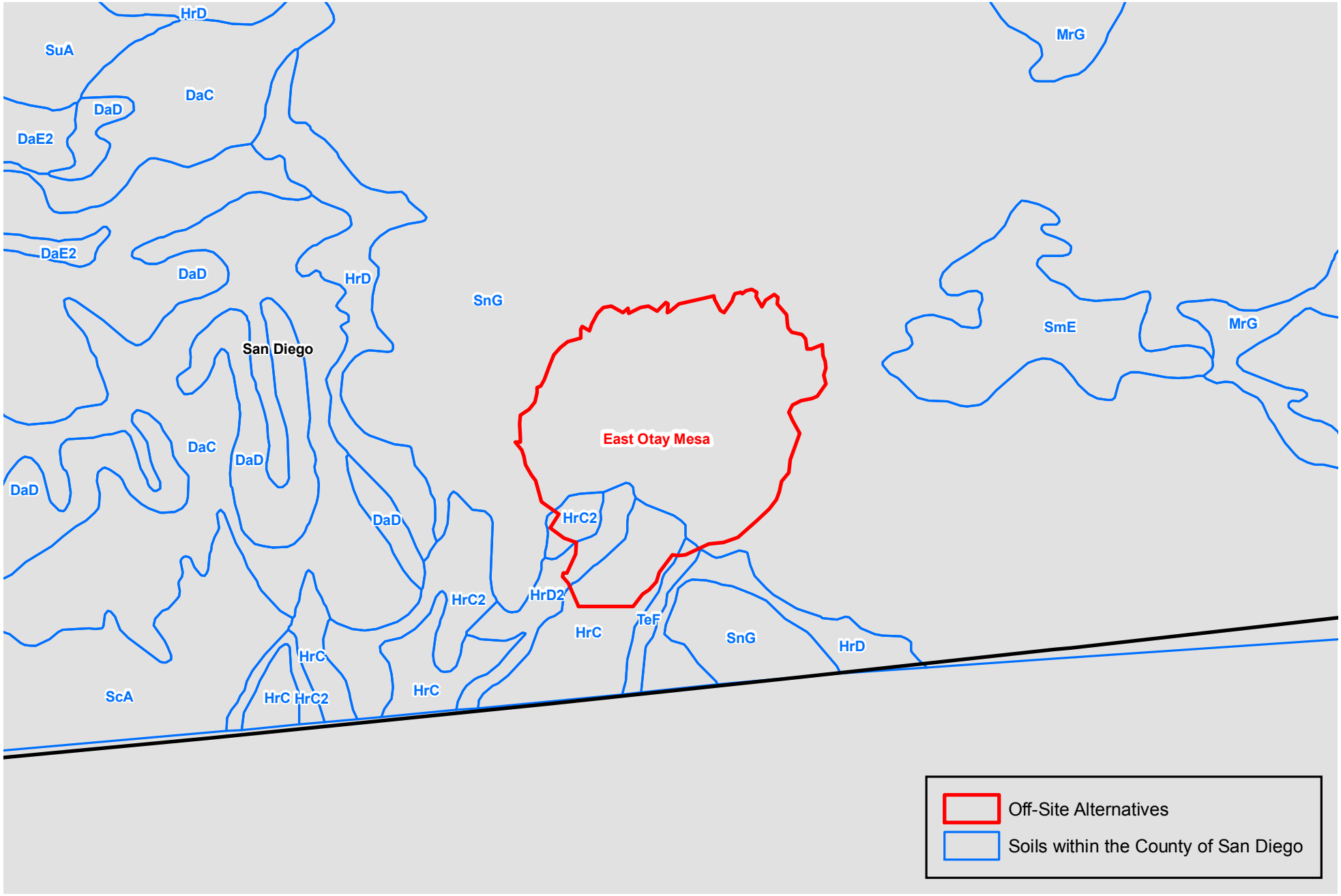
East Otay Mesa Area FMMP Map

Gregory Canyon

Source: FMMP, 2002; PCR Services Corporation, 2012.

FIGURE

37



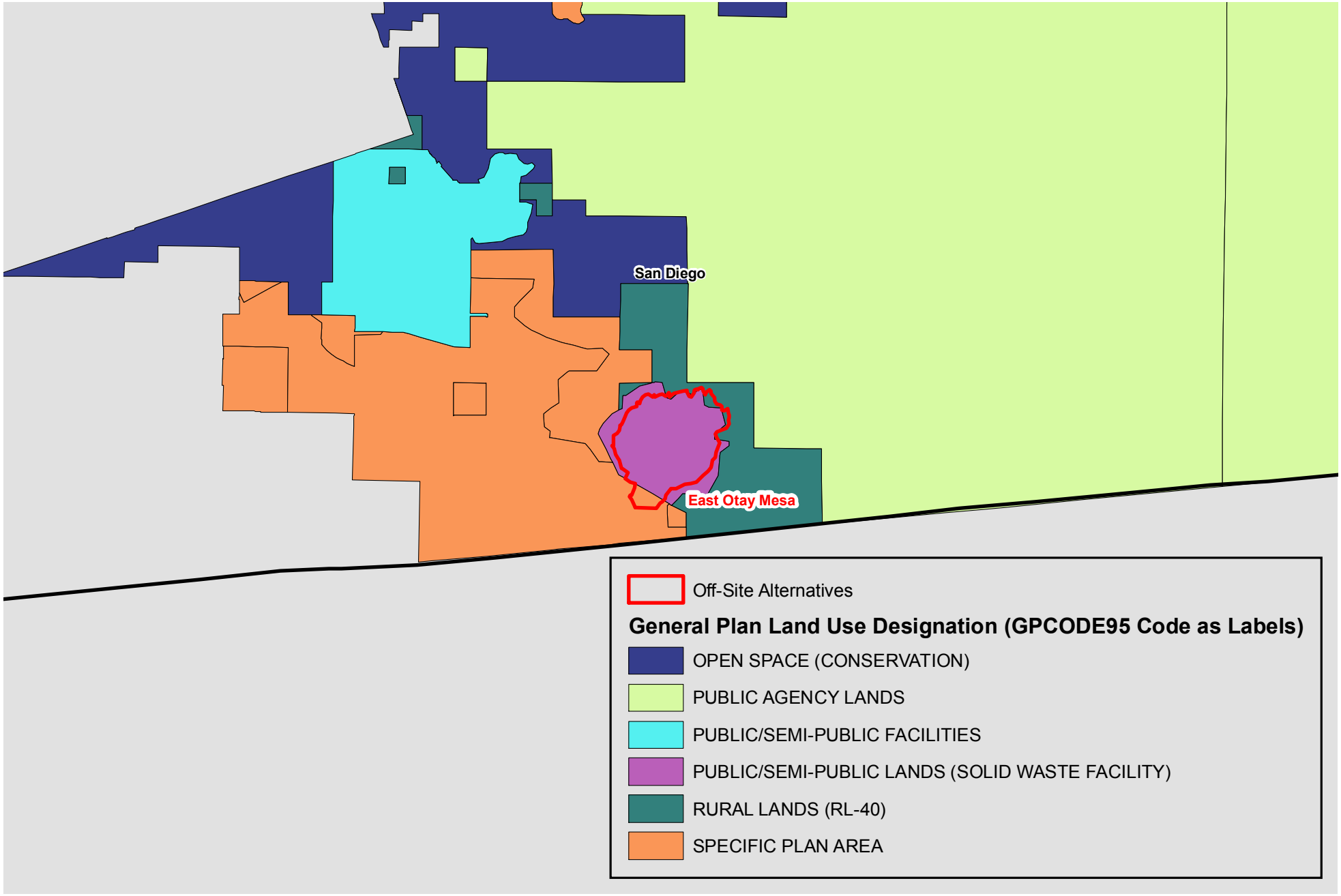
East Otay Mesa Area Soils

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

38



East Otay Mesa - General Plan Update Designated Land Uses

FIGURE
39

Gregory Canyon
Source: SANDAG, 2012; PCR Services Corporation, 2012.

As shown in Figure 39, the site is designated as Public/Semi-Public (Solid Waste Facility). Several industrial/business park uses have been developed in the area directly to the west of the landfill site, within the boundaries of the East Otay Mesa Business Park Specific Plan. As described in the Specific Plan, the flatter land in the area was historically used for agriculture.[7] The Otay Valley Regional Park (a designated "conservation-limited use" area under the Specific Plan) is located to the northwest of the site. The land uses associated with the Specific Plan are illustrated in **Figure 40**, *East Otay Mesa Business Park Specific Plan Land Use Map***.** As shown in Figure 40, a 1,000-foot "landfill buffer overlay" is designated along the west edge of the landfill site. Areas designated as mixed industrial, light industrial, and technology business park are located within a broad section of land designated as Farmland of Local Importance in the FMMP map (see Figure 37, above).

San Diego County maps of agricultural commodities in the area of the East Otay Mesa site indicate that the nearest mapped agricultural commodities are a minimum of three miles to the west. These designated areas are illustrated in **Figure 41,** *East Otay Mesa Area – Agriculture Commodities*. **Figure 42**, *East Otay Mesa Agricultural Preserved Contracts*, indicates that the nearest Williamson Act properties are located several miles to the northeast of the site. Because these areas are located a substantial distance from the East Otay Mesa site and because agricultural activities on the East Otay Mesa Alternative site would not meet the anticipated land use of the San Diego General Plan applicable to the site, the continued agricultural use of the property would not meet the expectations of owners of surrounding properties with respect to the expected future use of the site. Although the adjacent area is undergoing a transition from agricultural to industrial, which would indicate a "low" rating, the potential exists for continued agricultural use of the site since agricultural uses are not prohibited by the Solid Waste Facility (SWF) zoning. Therefore, the LARA Model Rating with respect to surrounding land uses is considered to be "moderate."

Land Use Consistency

The East Otay Mesa Alternative site is designated in the County's General Plan as a Public/Semi-Public Solid Waste Facility use and is zoned SWF. The designated land use is illustrated in Figure 39. The East Otay Mesa property, which abuts the east boundary of the East Otay Mesa Specific Plan designates the site as a "Landfill Initiative" (see Figure 40). The Specific Plan also shows a 1,000 foot buffer on the east edge of the Specific Plan between other designated land uses and the "Landfill Initiative." At the end of the approximately 30-year operation of the landfill, the portion of the site used for the landfill operation would remain as permanent, undeveloped open space. Agriculture would be inconsistent with the anticipated use under the General Plan and adjacent East Otay Mesa Specific Plan. Although the SWF zone would not prohibit a continued agricultural use of the site, because agriculture is not the intended purpose of the existing land use designation and zoning, the LARA Model Factor Rating with respect to land use consistency would be considered to be "low."

Slope

The East Otay Mesa site comprises a southwest-oriented, horseshoe -shaped canyon, which broadens and flattens at the foot of the drainage forming the canyon. The lower, flatter area occurs in the southwest segment of the site. In this area, slopes range from approximately 2 percent to 9 percent, which would be suitable for field crops. The remainder of the property comprises the deeper segment of the canyon and canyon slopes in an area designated grazing land. This area is relatively steep and would be less suitable for

[7] *East Otay Mesa Business Park Specific Plan, page 2 (2010).*

field crops or similar agricultural uses. Although the majority of the site is characterized by moderate and steep slopes, because the flat areas are located in the designated area of Farmland of Local Importance, the slope rating for the site is considered to be "moderate."

Summary of LARA Analysis for the East Otay Mesa Alternative Site

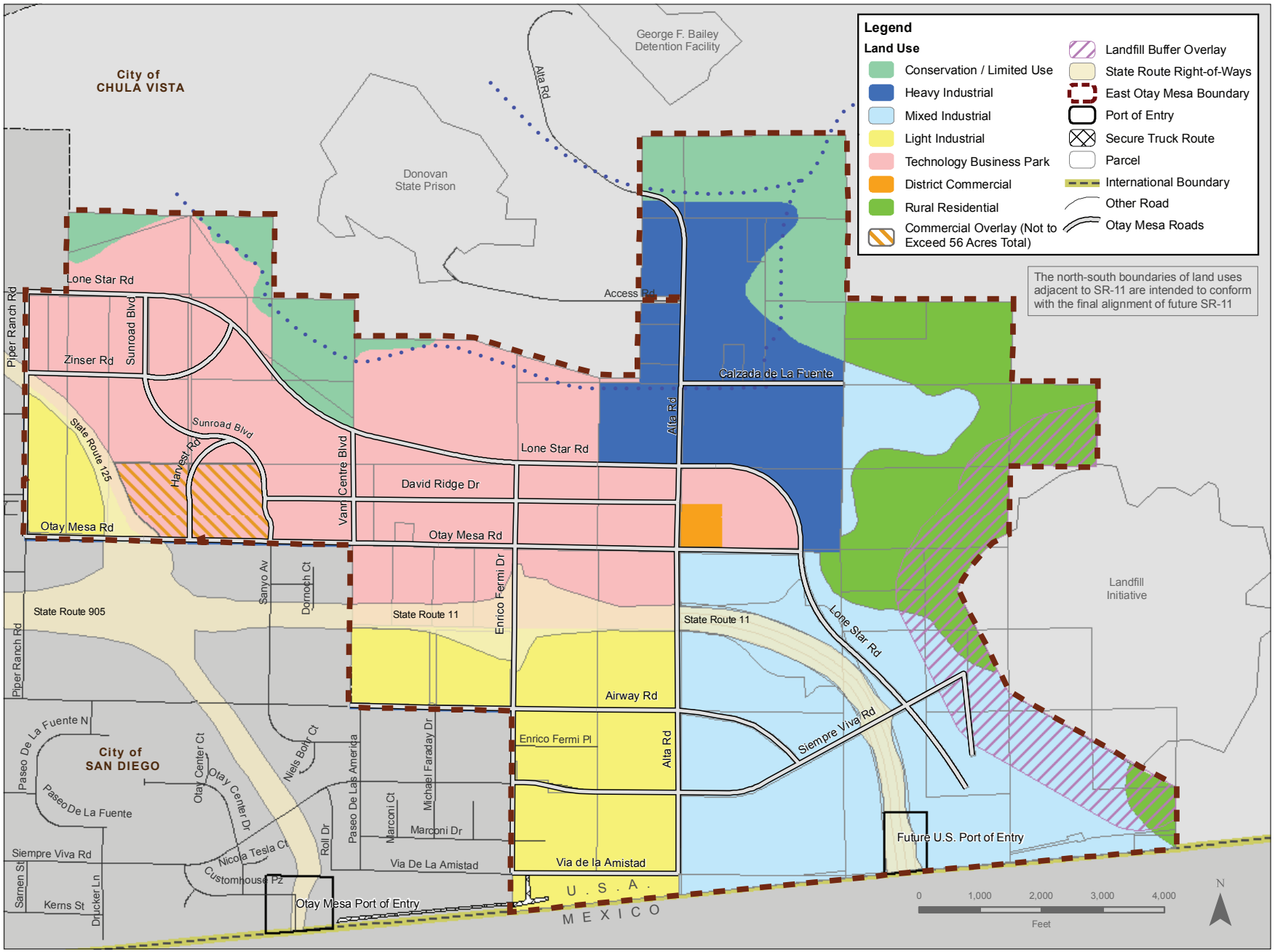
In order for the site to be considered an important agricultural resource based on the LARA model, all three "required factors" (water, climate and soil) must receive a "high" or "moderate" score. If a "required factors" is rated as "moderate," at least one "complementary" factors (surrounding land uses, land use consistency, and slope) must be rated "high" in order for the property to be considered an important agricultural resource.

Table 9, *LARA Model Factor Ratings for the East Otay Mesa Alternative Site,* provides a summary of the rating for each of the required factors, discussed above, for the East Otay Mesa property. As shown in Table 9, under "required factors," the East Otay Mesa property would have a "moderate" rating with respect to water and a "high" rating with respect to soil quality and climate. Under "complementary factors," the property would have "moderate" ratings with respect to surrounding land use and slope and a "low" rating with respect to land use consistency. The majority of "moderate" ratings and the "low" land use consistency rating indicate that the site would not be considered an important agricultural resource.

Table 9
LARA Model Factor Ratings for the East Otay Mesa Alternative Site

	LARA Model Rating		
Required Factors	**High**	**Moderate**	**Low**
Water		X	
Climate	X		
Soil Quality	X		
Complementary Factors			
Surrounding Land Uses		X	
Land Use Consistency			X
Slope		X	

Source: PCR Services Corporation, 2012



N

0 2000 Feet

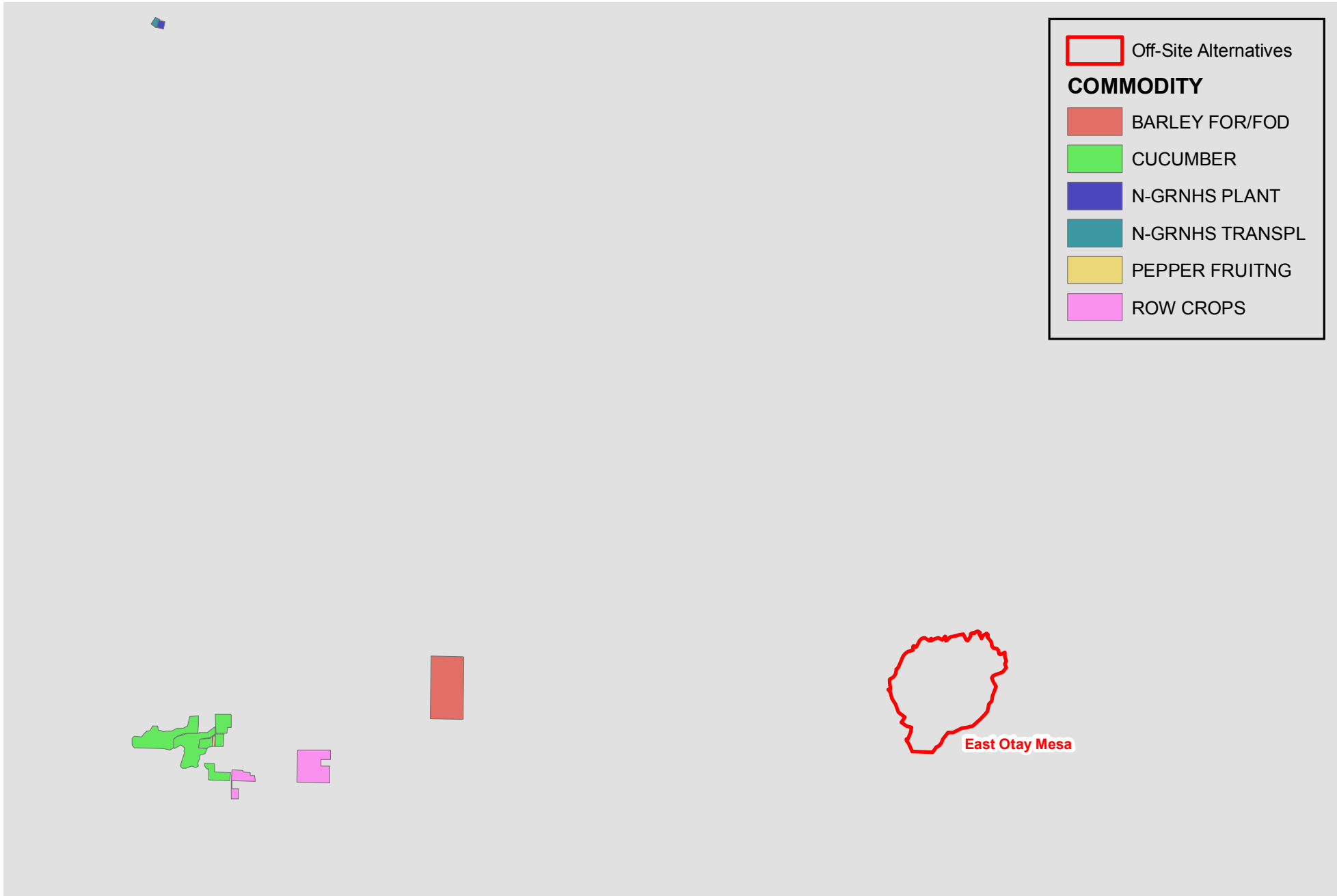
East Otay Mesa Business Park Specific Plan Land Use Map

Gregory Canyon

Source: East Otay Mesa Business Park Specific Plan, 2010.

FIGURE

40



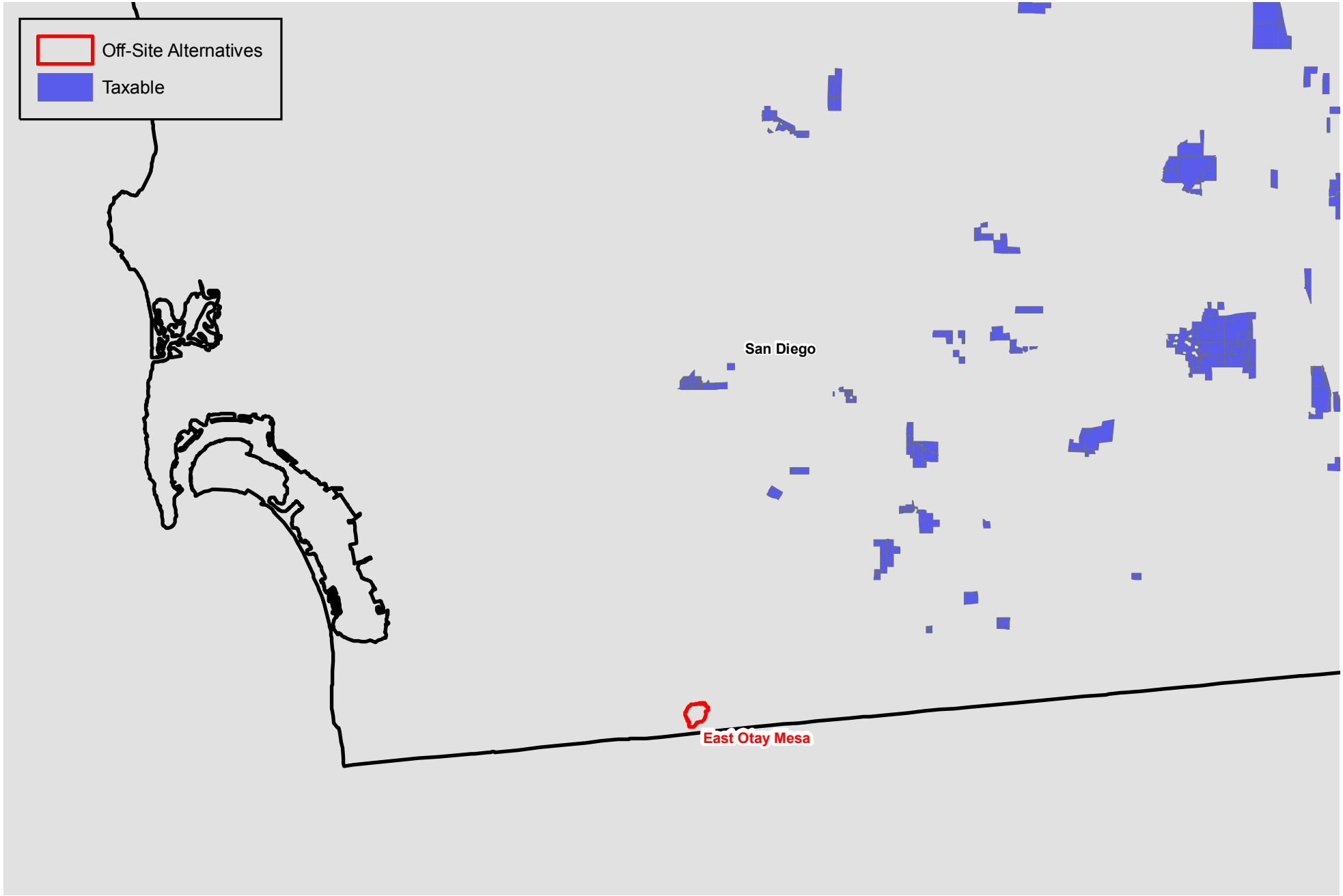
East Otay Mesa Area - Agriculture Commodities

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

41



N

0 5 10 Miles

East Otay Mesa Agricultural Preserved Contracts

Gregory Canyon

Source: SANDAG, 2012; PCR Services Corporation, 2012.

FIGURE

42

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F. Sycamore Canyon Expansion Alternative

The Sycamore Canyon Expansion Alternative is not located in unincorporated San Diego County and is not subject to a LARA assessment. However, certain mapping information is pertinent to the evaluation of agricultural resources at the site. These include information regarding the location of the site with respect to FMMP soils designations and agricultural preserves contracts. As shown in **Figure 43**, *Sycamore Canyon Expansion Area – FMMP Map*, no soils that are considered to be of statewide or local importance, unique farmland, or other agricultural designations or located on the site or in the vicinity. Figure 5.1-1 (Existing and Proposed General Plan Land Use Designations) in the Sycamore Landfill Master Development Plan Revised Draft EIR (May 2012) shows that the site is designated as Industrial/Employment and Park/Open Space/Recreation and is surrounded by land designated as Park/Open Space/Recreation. No designated agricultural lands are located in the vicinity. In addition, as shown in **Figure 44**, *Sycamore Canyon Expansion Area – Agricultural Preserves Contracts*, no Williamson Act contracts are located on the site or in the vicinity of the site. As indicated by these figures, the site would not be considered an important agricultural resource.

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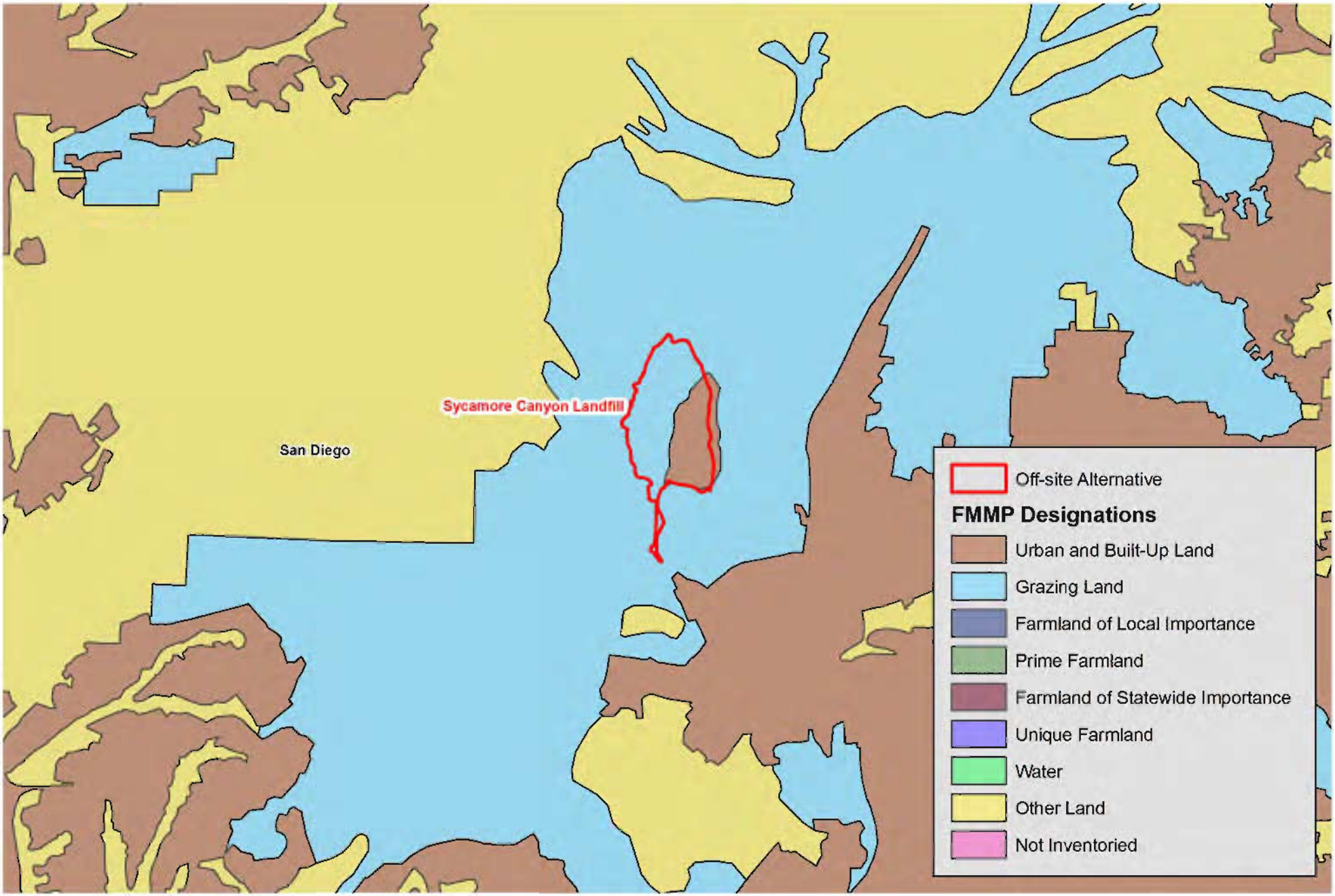


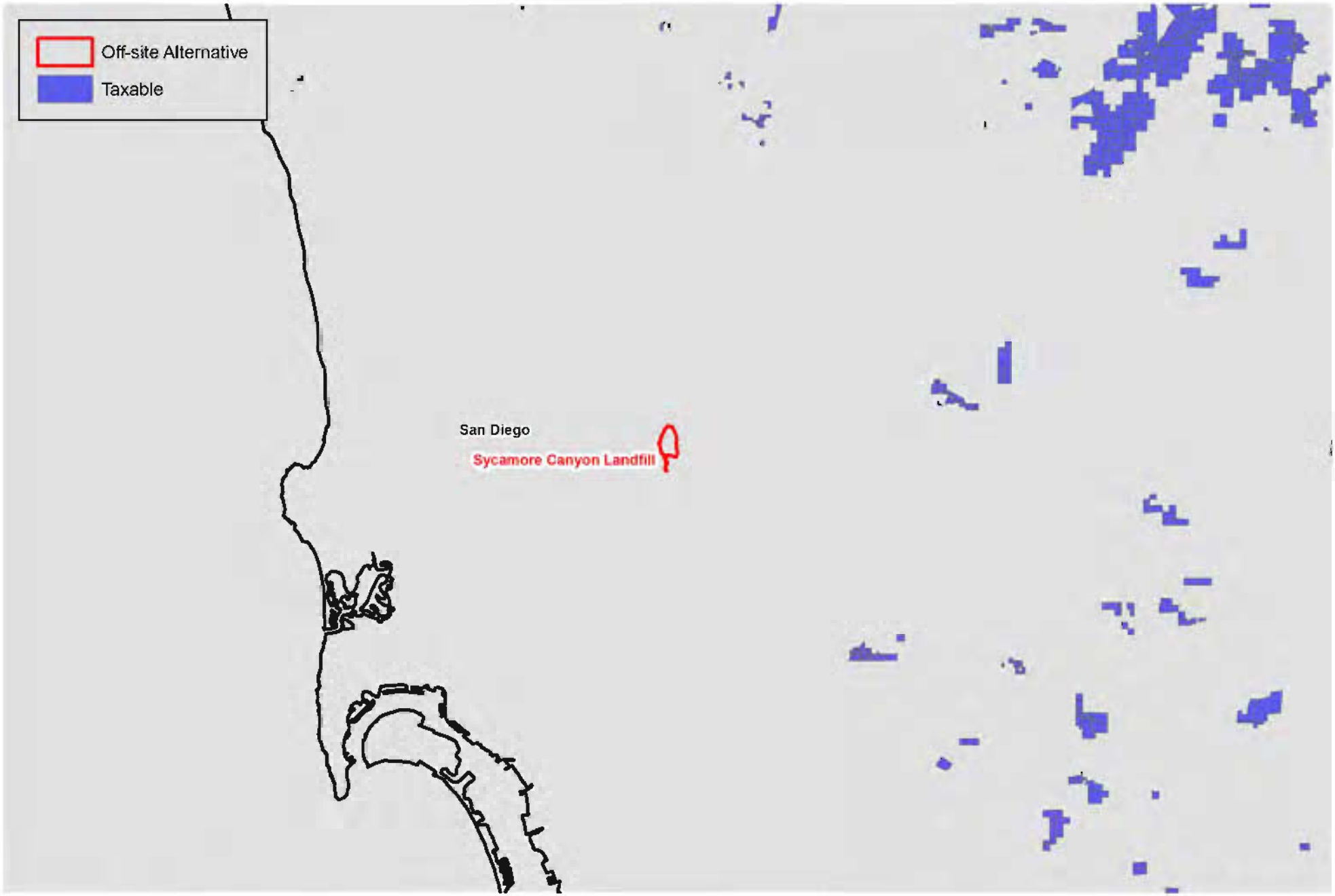
Sycamore Canyon - FMMP Map

Gregory Canyon

Source: FMMP, 2002; PCR Services Corporation, 2012.

FIGURE

43



Sycamore Canyon - Agricultural Preserves Contracts

FIGURE
44

Gregory Canyon
Source: SANDAG, 2012; PCR Services Corporation, 2012.

US Army Corps
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Los Angeles District, Regulatory Division
2152 Alessandro Drive, Suite 110
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